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BLUE JAY

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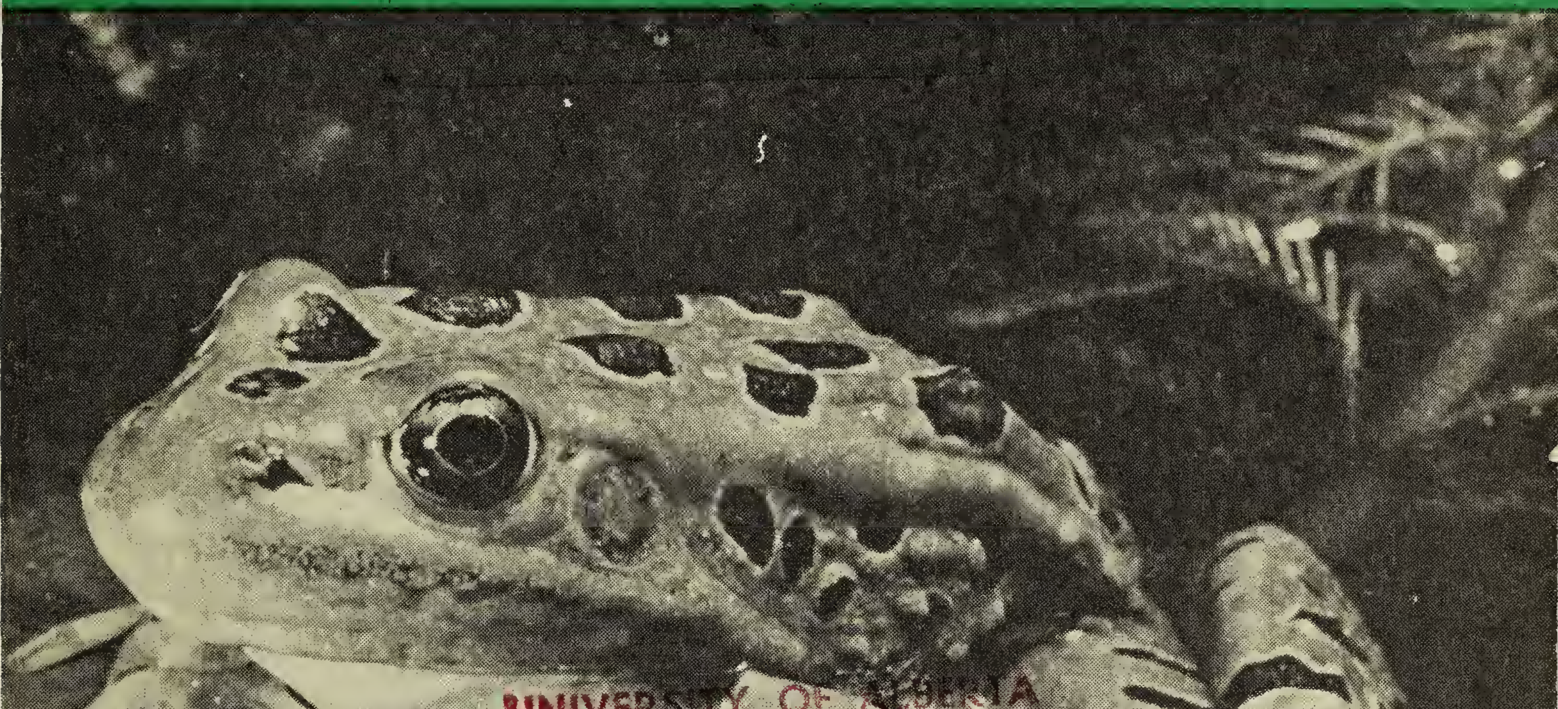
HE Blue Jay

Vol. XVII, No. 1 MARCH, 1959



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Published quarterly by
THE SASKATCHEWAN NATURAL HISTORY SOCIETY

Membership, including **Blue Jay,** one dollar yearly

BLUE JAY CHATTER

JAMES ALEXANDER MUNRO

The **Blue Jay** would like to pay tribute here to the work of Jim Munro, one of the top ornithologists and conservationists in Western Canada, who died Sept. 29, 1958. For 30 years (1919-1949) Jim Munro served as Dominion Wildlife Officer for the four western provinces; in addition, he wrote nearly 150 papers on the fauna of western Canada (including Saskatchewan birds), as well as **An Introduction to Bird Study in British Columbia** (1931) used in the province's schools, and the authoritative **Review of the Bird Fauna of British Columbia** (1947) with I. McT. Cowan. Just before Mr. Munro died, the Royal Ontario Museum purchased his great collection of 11,200 specimens of birds and mammals, which will form a fitting memorial to this great naturalist.

PUBLICATIONS—Our first special publication, W. H. Beck's **A Guide to Saskatchewan Mammals,** is being distributed and we have received many comments on it. At this time, it may be useful to review what the society is trying to accomplish in publishing these special publications and its quarterly magazine **The Blue Jay.** These two phases of the work of the society may be thought of as complementary. As a rule, material submitted goes directly into the Blue Jay magazine, but in the case of really long articles describing a specialized study (sometimes of interest only to a special group) we feel that we have material for a "special publication."

In the **Blue Jay** magazine, we attempt to have as many items as possible representing as many natural history interests as possible. Sometimes these items are of scientific value, but often they have no scientific pretensions at all. We think that reader response justifies this approach. The **Blue Jay** is reputedly a non-technical journal, and we are always pleased to see that its reputation as such has travelled far. An inquiry came to us a few days ago from a man who has often seen mention made of the **Blue Jay** in the journal of the British Naturalists' Association, **Countryside.** He writes, "From the write-ups, I have thought that the **Blue Jay** would contain articles of interest to me . . . I am very interested in wildlife although I make no pretensions to being scientific—just a love of all the wild things around me, be they mammals, birds, flowers, or insects, etc."

The number of items printed depends on the space available. If you would like to see the **Blue Jay** grow in size, please go out and sell the **Blue Jay** or send us an extra dollar and tell us that you would like to see the fee raised to $2.00. Each issue costs $800.00, requiring a membership of 3200 to pay printing costs alone.

In addition to trying to increase our membership to support the **Blue Jay,** the society is striving this year to raise special funds for the bulletins on birds that we hope to publish before the A.O.U. comes to Regina. The $81.00 received to date in response to the appeal on our renewal notices for donations indicates that a great many people think we should publish longer articles as special publications. Thank you for your support!

MEETINGS — This year there will be two meetings of special interest to our members — the summer meeting at Moose Mountain Provincial Park on the weekend of June 13-14, and the annual meeting of the A.O.U. in Regina, August 25-30. We are glad to be getting down into Peter McLellan's part of the province for our summer meet, and will look forward to seeing many members there. We hope a number of you will also plan to attend the A.O.U. meeting in August. This is really a rare opportunity for our birders, to whom I shall say as one of our junior members, Glen Fox, did in his last letter: "See you at A.O.U.!"

The Blue Jay

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VOL. XVII, No. 1 MARCH, 1959 Pages 1-44

TABLE OF CONTENTS

SEEN BY A SEER, *J. Boswell Belcher* 2
A. O. U. MEETING, REGINA, AUGUST 25-30, 1959 3
S. N. H. S. BRIEF RE: PROTECTION OF BIRDS OF PREY 3

BIRD NOTES:

Seventeenth annual Saskatchewan Christmas bird count, 1958, Mary Houston 4
Annual report on Whooping Cranes in Saskatchewan, 1958, F. G. Bard 9
First annual report on the Prairie Nest Records Scheme 12
Information please (Colonial birds, Goshawks, Peregrine Falcon, Bufflehead) 13
Plant more fruit trees to attract birds, Mrs. O. L. Wolters 13
Bird houses, F. G. Bard 14
Where are the bachelor Canvasbacks? D. P. Olson 16
Unusual nest sites of American Robin and Slate-colored Junco, M. Street 17
Mockingbird in Saskatoon, Lillian Headley 17
Cardinal at Kelwood, W. G. Rosenbarker 17
Saw-whet rare visitor (Kindersley, Regina, Lumsden, Skull Creek) 17
S.N.H.S. Summer Meeting—Moose Mountain, June 13-14, 1959 17

PLANT NOTES:

Some native "greens" of Saskatchewan, Keith Best and Archie Budd 18
A new plant record for Sask. (*Crepis atribarba*), Charles D. Bird 19
Post-glacial forest at Kayville uncovered, Joyce Dew 20
Pink Saskatoons, Lad Martinovsky 21
Silvery Groundsel (*Senecio canus*), W. C. McCalla 22
BOYS' AND GIRLS' SECTION, edited by *Joyce Dew* 23
NATURE PHOTOGRAPHY, *Hans Dommasch* 28

MAMMAL NOTES:

Beavers do cut down big trees, F. H. Gummerson 30
Raccoons in Saskatchewan, C. Stuart Francis 30
Short-tailed Shrew at Wauchope, H. H. Pittman 30
Grasshopper Mouse, photos by Richard W. Fyfe 31
AN AGATE BASIN POINT SITE IN SASKATCHEWAN, *Robert W. Nero* 32
THE SPADEFOOT TOAD IN SASKATCHEWAN, *Robert W. Nero* 41

THE BLUE JAY BOOKSHELF:

The birds of Alberta, by W. Ray Salt and A. L. Wilk, reviewed by C. Stuart Houston 43
A guide to Saskatchewan mammals, by W. H. Beck, reviewed by E. Raymond Hall 44

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Seen by a Seer

By **Boswell Belcher**, Dilke.

Photo by Elmer Fox

YOUNG GREAT HORNED OWL

I haven't seen anything of special interest for many moons but now that Christmas is over I thought I had better write something before the crows come back to herald another busy season — if only to let you know I haven't deserted the seers to become a watcher.

Last April I saw the largest flock of Sandhill Cranes I have ever seen or expect to see. I only wish I knew even approximately how many there were, but I must be satisfied to say there were many thousands. Mum and I were on our way to town one morning when I noticed them rising from the stubble field about a quarter of a mile away. We stopped, watched and listened as more and more kept rising until acres and acres and acres of cranes became clouds banking, reeling and finally drifting away amid the roar of their talking and wing-beats. I took two pictures, but the birds were too far away against the bright stubble and sky to give even an impression of the vastness of the flock.

Last summer we had two nests of Great Horned Owls in poplar bluffs on the farm. One day I found two young birds on the ground below their nest. I presume they had fallen out during one of the very strong winds we had in the spring as their nest was not too sheltered. They were nevertheless well cared for by the parents and lived to be much photographed, as well as banded for Stuart Houston. Although they grew up, however, their lives were short—one was found dead on the road a quarter of a mile away later in the summer, and the other was caught in a crow trap at Gibbs on the other side of Long Lake, approximately 25 miles east of here, on September 30.

This winter we had a Rusty Blackbird (the first I have ever seen to recognize). here with us. It first appeared early in December and could be seen every day with the House Sparrows. There is plenty of shelter and food — grain, hay seeds, etc. — around the shelterbelt and barn yard, but the blackbird looked very cold on sub-zero stormy days and finally succumbed to the biting cold weather of the first week in January.

Mice seem to be unusually plentiful here this year. When we were taking some sheaves off an open bin of oats in mid-July the mice were jumping off in such numbers they reminded one of the Pied Piper leading the rats. This winter we find the same numbers in the year-old sheaf stacks and the damage in cut strings and shelled oats is most aggravating, but our friends the cats are having an all-winter field day as is evident by the many trips they make from the barn to the stack-yard even in the miserable sub-zero weather. We have some late September kittens and one afternoon while we were around the barn the two mother cats brought eleven mice to them.

We have no dog or sharpshooters about to discourage the jackrabbits from coming into the shelterbelt in the winter, but this year I found that the storms of early January had brought one to spend the day under the old car which has been demoted to sitting outside the garage. This is only half a stone's throw from the kitchen door and right beside the tractor shed where I go two or three times a day. Apparently the rabbit is less afraid of man and his machines than of its enemies in the field. I have often noticed how cats like to sit under a car. Probably the rabbit found the same benefit, only needing to watch for danger around him, and not from above.

A.O.U. MEETING, REGINA, AUGUST 25 - 30

Plans for the American Ornithologists' Union meeting at Regina in August are being made by the steering committee (Dr. Robert Nero, Chairman, Fred Bard, Margaret Belcher, Elmer Fox, Richard Fyfe, Dr. George Ledingham), with special committees as follows: Exhibits (Joyce Dew), Finance (Elmer Fox), Accommodation and Transportation (Frank Brazier), Meals (Bruce Knox), Field Trips (Fred Bard), Publicity (Richard Fyfe), Registration (Jean Hodges), Wives (Gertrude Murray), Visual Aids (Jim Millington), and local secretary, Marjorie Ledingham.

The programme of events is tentatively planned as follows:

Tuesday, August 25: Registration (afternoon and evening); A.O.U. business meetings (Council members, Fellows, elective members only); informal Museum open house (refreshments, films) in evening.

Wednesday, August 26: Registration (all day); papers sessions (lectures, films, reports) all day; opening Canadian bird art exhibit and reception Norman Mackenzie Art Gallery in evening.

Thursday, August 27: Registration (all day); papers sessions (all day); picnic supper Wascana Park, film programme at Museum.

Friday, August 28: Papers sessions (all day); evening: annual banquet (Premier T. C. Douglas, one of guest speakers), films.

Saturday, August 29: All-day field trip to north end of Last Mountain Lake.

Sunday, August 30: Additional local field trip.

Arrangements will be made for local birding each morning before meetings. Registration fee of $2.00 covers picnic supper and annual banquet. All members of the S.N.H.S. are welcome to attend the A.O.U. meeting. People interested in birds, in particular, ought to take advantage of this wonderful opportunity to rub elbows with some of the foremost ornithologists of our time.

Preliminary Draft of A Brief from the SASKATCHEWAN NATURAL HISTORY SOCIETY to the Government of the Province of Saskatchewan

Editor's Note—At the executive meeting of the S.N.H.S. on October 19, 1958 Dr. R. Bremner was named chairman of the committee asked to prepare a brief for submission to the provincial government requesting protection for birds of prey. The preliminary draft of this brief, accepted at a meeting of the executive January 24, 1959, is presented here for your consideration. Please give it all the support you can. Letters from individuals to our MLA's would strengthen our cause.

Encouraging support has already been received for the resolution, notably at the regional meeting of the Fish and Game League held in Melfort, where members unanimously passed the resolution submitted by the Yorkton branch calling for protection of hawks and owls.

News of the latest protection legislation comes from New York State. Effective Oct. 1, 1958, the new legislation gives protection to the Great Horned Owl, Cooper's Hawk, Sharp-shinned Hawk and Goshawk (except that they may be shot when caught preying upon poultry), thus extending protection to all hawks and owls in the state.

In recent years, a steadily increasing number of the citizens of Saskatchewan have become aware of the importance of the province's wildlife and of the necessity of protecting it by suitable legislation. In the matter of game management, the Wildlife Branch of the Saskatchewan Department of Natural Resources is to be commended for its progressive policies; indeed it has often taken the lead over other provinces in Canada in instituting practices that are in line with the best current thinking on conservation. However, with respect to the birds of prey Saskatchewan has not yet revised its legislation to afford the degree of protection which has recently been given these predators elsewhere in Canada.

It is only in our modern era that the role of natural predators has received close and careful scrutiny. With our present knowledge of ecol-

(Continued on page 26)

Seventeenth Annual

Saskatchewan Christmas Bird Count, 1958

Edited by **Mary Houston**, Yorkton.

This year's count was an all-time record; both in the number of localities reporting (32) and in the number of species seen (55 on the actual counts, and 5 extras seen during the period of Dec. 20 to Jan. 1).

Four new species were recorded this year bringing the total for the 17 years of Saskatchewan Christmas Counts to 92 species. These were Sparrow Hawk (at Lumsden), Sage Grouse (at Masefield) and Ring-billed Gull and Oregon Junco (both at Saskatoon).

In past years, we have not included Mute Swans or Pigeons (Rock Doves) as both were considered semi-domesticated, and neither was on the Saskatchewan Field Check-List. The inconsistency of this stand became more apparent this year Both species are on the A.O.U. List; we count Chukar Partridges; Karasiuk pointed out that the Prince Albert pigeons were wild ones living under the bridge. Following consultation with Museum officials, we can announce that in future the Mute Swan and Rock Dove will be on the official provincial list. This change then raises the all-time total to 94 species.

Congratulations to the Moose Jaw Natural History Society for getting such good participation for their first count, and to the Saskatoon Society for the most thorough coverage and highest total of species (23). The Cruickshanks at Lumsden saw 22 species, a most remarkable total. We welcome David Chandler at Masefield, a new area. Five other new localities are represented by young observers—Gary Anweiler at Melville, Glen Fox at Kindersley, Billy Horseman at Saltcoats, Jacob Jmaeff at Kamsack and Spencer Sealy at Battleford. These lads turned in good counts for their areas; they will be the Streets and Callins of the future. Horseman and Anweiler also took part in the 20-observer Yorkton count, and it was Horseman who turned up the 17th species in late afternoon at Yorkton, to beat his own single-handed record of 16 species at Saltcoats a few days previously.

Black-billed Magpies are very common this winter and were reported from all 32 localities. House-Sparrows and Black-capped Chickadees were reported during Christmas week from 27 localities, Sharp-tailed Grouse from 25, Snow Buntings from 23, Common Redpolls and Downy Woodpeckers from 19, Gray Partridge from 18, Ruffed Grouse from 18, Pine Grosbeaks from 17, Hairy Woodpeckers from 17 and Bohemian Waxwings and Horned Owls from only 13. Snowy Owls were seen at only five localities and seem at the low point of their cycle.

Pigeon Hawks were reported from Nipawin, Saskatoon and Yorkton during the actual count, and from Spirit Lake and Prince Albert the same week. Rusty Blackbirds were noted at Craven, Dilke, Lumsden and Regina.

It is unfortunate that Steve Mann and party's count (taken on Jan. 10, 1959), was too late to be included in the official summary, for it contained such interesting species as Saw-whet Owl and Brown-headed Cowbird.

BANGOR, Sask. Dec. 31; 16 miles by car and 1 hour on foot about yard; sunny. 6 species, 99 individuals. Ruffed Grouse, 1; Sharp tailed Grouse, 5; Black-billed Magpie, 8; Black-capped Chickadee, 7; House Sparrow, 75; Snow Bunting, 3.—**Mrs. A. Thompson.**

BATTLEFORD, Sask., Dec. 26, nine miles by car, in 5 hours; temp. 16°; no wind; cloudy; 10 inches of snow. 13 species, 251 individuals. Ruffed Grouse, 1; Sharp-tailed Grouse, 1; Ring-necked Pheasant, 1; Gray Partridge, 9; Downy Woodpecker, 4; Black-billed Magpie, 21; Black-capped Chickadee, 25; Bohemian Waxwing, 55; House Sparrow, 43; Pine Grosbeak, 52; Common Redpoll, 13; Pine Siskins, 24; Snow Bunting 2.—**Spencer G. Sealy.**

BIG RIVER, Sask. Dec. 26, 4 miles by truck and 1 mile on foot in 3 hours; temp. 15°; wind N.W. 15 mph.; cloudy; 16-18 inches of snow. 10 species, 75 individuals. Hairy Woodpecker, 8; Downy Woodpecker, 4; Gray Jay, 1; Blue Jay, 5; Black-billed Magpie, 6; Common Raven, 4; Black-capped Chickadee, 25; White-breasted Nuthatch, 2; Evening Grosbeak, 9; Common Redpoll, 11; Hawk Owl, 1; Pileated Woodpecker, 2; Snow Bunting, 50.—**Mrs. Anne Olson.**

HIGH HILL, Sask. Dec. 28, 16 party hours and 25 party miles; temp. 7°; wind westerly and light; clear, becoming cloudy in afternoon; 18 inches of snow. 15 species, 44 individuals. Goshawk, 2; Rough-legged Hawk, 1; Ruffed Grouse, 14; Sharp-tailed Grouse, 1; Great Horned Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Black-backed Three-toed Woodpecker, 1; Northern Three-toed Woodpecker, 1; Gray Jay, 4; Blue Jay, 1; Black-billed Magpie, 1; Common Raven, 6; Black-capped Chickadee, 8; Boreal Chickadee, 1; Golden Eagle, 1; Pileated Woodpecker, 1; House Sparrow, 4; Pine Grosbeak, 17; Snow Bunting, 12.—**Anton** and **Steve Waycheshen.**

BLADWORTH, Sask. Dec. 31, ½ hour by truck and 2¼ hours on foot; temp. 20-34°; wind SSE. 6-8 mph.; overcast; 10-12 inches of snow. 9 species, 397 individuals. Golden Eagle, 1; Sharp-tailed Grouse, 11; Gray Partridge, 28; Great Horned Owl, 1; Black-billed Magpie, 5; Black-capped Chickadee, 3; House Sparrow, 16; Common Redpoll, 331; Snow Bunting, 1; Bohemian Waxwing, 1, Dec. 30; Brewer's Blackbird, 1, Dec. 27.—**P. Lawrence Beckie.**

BROADVIEW, Sask. Dec. 28, 4 hours and 40 miles by car; temp. —20°; strong wind; overcast. 3 species, 21 individuals. Golden Eagle, 1; Black-billed Magpie, 10; Common Redpoll, 10; Sharp-tailed Grouse, 6, Dec. 27; Gray Partridge, 6, Dec. 29; Downy Woodpecker, 1, Dec. 26; Black-capped Chickadee, 1, Dec. 27.—**Audrey** and **Charles Thacker.**

CRAVEN, Sask. Dec. 30, 54 miles on foot and 60 miles by car; temp. 3-22°; wind light; 7 observers in 4 parties. 19 species, 972 individuals. Golden Eagle, 1; Ruffed Grouse, 1; Gray Partridge, 9; Great Horned Owl, 1; Hairy Woodpecker, 6; Downy Woodpecker, 6; Black-billed Magpie, 87; Common Crow, 1; Black-capped Chickadee, 37; White-breasted Nuthatch, 1; Bohemian Waxwing, 4; Starling, 40; House Sparrow, 755; Rusty Blackbird, 1; Pine Grosbeak, 2; Hoary Redpoll, 2; Common Redpoll, 14; Tree Sparrow, 3; Snow Bunting, 1; plus one unidentified dark-phase hawk, making a 20th species.—**Dr. R. W. Nero, Richard Fyfe, Albert Swanston, Fred Lahrman, Elmer Fox, Reginald Fox, Frank Brazier.**

DILKE, Sask. Dec. 26, 6 miles in 8 hours on foot and with team about yard and field; temp. 17-19°; wind NW. 20-35 mph.; cloudy; 10 inches of snow; open prairie, farmland and shelterbelt. 7 species, 51 individuals. Golden Eagle, 1; Sharp-tailed Grouse, 7; Gray Partridge, 6; Hairy Woodpecker, 1; Black-billed Magpie, 5; House Sparrow, 30; Rusty Blackbird, 1. (Add: Great Horned Owl, 1, Dec. 20, 23; Downy Woodpecker, 1, Dec. 24; Starling, Dec. 23; Snow Bunting, Dec. 21, 22, 23, 25, 27, Jan. 1.)—**S. R. Belcher, J. B. Belcher** and **Margaret Belcher.**

FORT SAN., Sask. Dec. 28. 2¾ hours and 30 miles by car; temp. 10°; wind light; mostly clear; about 8 inches of snow. 7 species, 105 individuals. Hairy Woodpecker, 1; Downy Woodpecker, 2; Black-billed Magpie, 22; Black-capped Chickadee, 12; Bohemian Waxwing, 37; House Sparrow, 30; Common Redpoll, 1. (Add: Mallard, 7, Dec. 21; Golden Eagle, 2, Dec. 23; Ruffed Grouse, 3, Dec. 26; Sharp-tailed Grouse, 1, Dec. 25; Robin, 1, Dec. 23; Pine Grosbeak, 5, Dec. 24; Snow Bunting, 35, Dec. 26. **—James MacPherson, Jack Lowe, Errol Cochrane, Harry Spanier, E. M. Callin (Compiler).**

HAWARDEN, Sask. Dec. 24, 2 hours and 19 miles by car, and 2½ hours on foot about town, and on the farm and fields; temp. 36°; wind W at 15; 12 inches of snow. 5 species, 213 individuals. Gray Partridge, 7; Horned Lark, 4; Black-billed Magpie, 1; Starling, 1; House Sparrow, 200. (Add: Sharp-tailed Grouse, 11, Dec. 29; Snowy Owl, 1, Dec. 22, 25; Bohemian Waxwing, 1, Dec. 23; Common Redpoll, 1, Dec. 25).— **Harold Kvinge.**

KAMSACK, Sask. Dec. 31, 3½ hours on foot; temp. 22°; wind S at 16; cloudy; 15 inches of snow. 7 species, 225 individuals. Ruffed Grouse, 1; Sharp-tailed Grouse, 21; Black-billed Magpie, 5; Black-capped Chickadee, 5; House Sparrow, 48; Pine Grosbeak, 25; Snow Bunting, 120. (Add: Gray Partridge, 12, Dec. 27; Hairy Woodpecker, 1, Dec. 23, Jan. 1; Downy Woodpecker, 1, Dec. 22.)—**Jacob H. Jmaeff.**

KINDERSLEY, Sask. Dec. 26, 3¾ miles on foot in 2½ hours, and 6 miles by car in 1¼ hours; temp. 12°; wind NE at 3, gusting to 10; clear in a.m., clouding in p.m.; 1 foot of snow. 5 species, 385 individuals. Sharp-tailed Grouse, 8; Gray Partridge, 81; Black-billed Magpie, 3; Bohemian Waxwing, 16; House Sparrow, 277. (Add: Black-capped Chickadee, Dec. 21).—**Glen A. Fox (compiler), R. A. Lamont.**

LEADER, Sask. Dec. 31, 4 hours; temp. 40°; no wind; clear; 1 inch of snow. 2 species, 18 individuals. Ring-Necked Pheasant, 11; Black-billed Magpie, 7. (Add: Gray Partridge,). —**Daisy D. Meyers.**

LITTLE BEAR LAKE, Sask. Dec. 26, 5¼ hours; temp. 25°; occasional very light snow; cloudy; 14 inches of snow. 5 species, 21 individuals. Goshawk, 5; Spruce Grouse, 2; Great Horned Owl, 1; Gray Jay, 12; Black-billed Magpie, 1.—**Lloyd Ulvick, R. G. Lanz, M. G. Street (compiler).**

LUMSDEN, Sask. Dec. 29, 20 miles by car and 5 miles on foot and around farm, for 5 hours; temp. 20°. 22 species, 333 individuals. Golden Eagle, 1; Sparrow Hawk, 1; Ruffed Grouse, 4; Sharp-tailed Grouse, 6; Ring-necked Pheasant, 8; Chukar, 30; Gray Partridge, 23; Great Horned Owl, 1; Snowy Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Black-billed Magpie, 18; Common Crow, 1; Black-capped Chickadee, 35; Red-breasted Nuthatch, 2; Robin, 1; Bohemian Waxwing, 24; Starling, 15; House Sparrow, 100; Rusty Blackbird, 1; Common Redpoll, 8; Snow Bunting, 50. (Add: Bald Eagle,, 1; Saw-whet Owl, 1. — **Judy Bert** and **Pat Cruickshank.**

MASEFIELD, Sask. Dec. 26, 1 mile on foot along Frenchman River, and 28 miles by car across open prairie; 3½ hours; temp. 28°; sunny; 14 inches of snow. 10 species, 251 individuals. Golden Eagle, 1; Sharp-tailed Grouse, 7; Sage Grouse, 4; Ring-necked Pheasant, 8; Gray Partridge, 7; Snowy Owl, 1; Black-billed Magpie, 16; Black-capped Chickadee, 5; House Sparrow, 87; Snow Bunting, 115.—**J. David Chandler.**

MELVILLE, Sask. Dec. 28, 5 miles and 8 hours on foot; temp. 15°; wind light; sunny. 10 species, 128 individuals. Ruffed Grouse, 1; Sharp-tailed Grouse, 5; Blue Jay, 4; Black-billed Magpie, 9; Black-capped Chickadee, 12; House Sparrow, 75; Evening Grosbeak, 3; Pine Grosbeak, 11; Common Redpoll, 7; Snow Bunting, 1.—**Gary Anweiler.**

MOOSE JAY, Sask. Dec. 26, 82 miles and 12 hours by car, jeep and on foot; temp. 22°; wind NW 18, gusting to 27; cloudy; 6 inches of snow. 19 observers in 4 parties. 13 species, 1354 individuals. Goshawk, 1; Sharp-tailed Grouse, 36; Ring-necked Pheasant, 26; Gray Partridge, 23; Great Horned Owl, 1; Downy Woodpecker, 1; Black-billed Magpie, 38; Black-capped Chickadee, 4; Bohemian Waxwing, 87; Starling, 25; House Sparrow, 1100; Pine Grosbeak, 6; Common Redpoll, 6. (Add: Snowy Owl, 2, Dec. 30; Hairy Woodpecker, 1, Dec. 28; Robin, 1, Dec. 28; Slate-colored Junco, 20, Dec. 28; Snow Bunting, 40, Dec. 27).— **Carl Ellis, Frank Hill, Rosalind Taylor** (compiler), **Molly Ritchie, Kay Rankin, John Walker, Dr. and Mrs. D. M. Ewart, Douglas Ewart, Patty Ewart, Mr. McLaren Ewart, Mrs. M. H. Kennedy, Patrick Kennedy, Mrs. Cy Knight, Mrs. V. Humphreys, Mrs. Remington Walker, Robert Tabaka, Andy Rankin, Ned Jacob (members and friends of the Moose Jaw Natural History Society).**

MULLINGAR, Sask. Dec. 31, 1 hour with sleigh, 2 hours and 15 miles by car; temp. 25 to 30°; calm; cloudy; 6 inches of snow. 6 species, 76 individuals. Sharp-tailed Grouse, 12; Black-billed Magpie, 5; Black-capped Chickadee, 5; House Sparrow, 35; Pine Grosbeak, 5; Snow Bunting, 18. (Add: Ruffed Grouse, 1; Downy Woodpecker, 1; Gray Jay, 1; Common Raven, 1).—**Ralph T. Cowell.**

NAICAM, Sask. Dec. 30, 5 miles on foot and 5 miles by car in 6½ hours; temp. 25°; wind light; overcast; 8 inches of snow. 6 species, 47 individuals. Ruffed Grouse, 1; Sharp-tailed Grouse, 2; Black-billed Magpie, 2; Black-capped Chickadee, 2; House Sparrow, 35; Pine Grosbeak, 5. (Add: Great Horned Owl, 1, Dec. 22; Common Redpoll, 2, Dec. 22; Snow Bunting, 12, Dec. 22).— **W. Yanchinski.**

NIPAWIN, Sask. Dec. 25, 7½ hours; in and near town and at feeding station; temp. 20°; overcast with occasional light snow; 12 inches of snow. 16 species, 126 individuals. Pigeon Hawk, 1; Ruffed Grouse, 1; Sharp-tailed Grouse, 7; Pileated Woodpecker, 1; Hairy Woodpecker, 2; Downy Woodpecker, 2; Gray Jay, 2; Black-billed Magpie, 1; Common Raven, 2; Black-capped Chickadee, 4; Red-breasted Nuthatch, 1; House Sparrow, 55; Evening Grosbeak, 23; Pine Grosbeak, 13; Common Redpoll, 10; Slate-colored Junco, 1. (Add: Gray Partridge, 5; Blue Jay, 2; Starling, 1; Snow Bunting, 175).— **M. G. Street.**

PRINCE ALBERT, Sask. Dec. 26, 15 miles by car and 4 miles on foot in 4½ hours; temp. 25°; wind W at 7 mph.; clear in a.m., clouding in p.m.; 44 inches of snow. 13 species, 126 individuals. Mallard, 6; Common Merganser, 2; Rock Dove, 7; Hairy Woodpecker, 2; Northern Three-toed Woodpecker, 1; Gray Jay, 1; Black-billed Magpie, 4; Common Raven, 14; Black-capped Chickadee, 15; House Sparrow, 23; Evening Grosbeak, 17; Pine Grosbeak, 4; Common Redpoll, 30. (Add: Common Goldeneye, 1, Dec. 23; Pigeon Hawk, 1, Dec. 23; Blue Jay, 1, Dec. 30; Boreal Chickadee, 7, Dec. 23; Red-breasted Nuthatch, 1, Dec. 30; Hoary Redpoll, 1, Dec. 31; White-winged Crossbill, 18, Dec. 29).—**Tony Capusten, Don Karasiuk.**

REGINA, Sask. Dec. 26, 70 miles on foot and 165 by car; temp. 18-22°; wind WNW 35 mph.; 9 observers in 3 parties. 20 species, 1788 individuals. Mute Swan, 12; Whistling Swan, 2; Canada Goose, 110; Mallard, 250; Lesser Scaup, 4; Ruddy Duck, 1; Golden Eagle, 1; Sharp-tailed Grouse, 3; Gray Partridge, 37; Snowy Owl, 2; Downy Woodpecker, 4; Black-billed Magpie, 39; Black-capped Chickadee, 14; Bohemian Waxwing, 39; Starling, 4; House Sparrow, 1100; Rusty Blackbird, 1; Common Redpoll, 1; Song Sparrow, 1; Snow Bunting, 163.—**Dr. and Mrs. G. F. Ledingham, Mrs. E. Cruickshank, Christine MacDonald, Dr. R. W. Nero, Mrs. H. Robertson, Miss C. Pratt, Frank Brazier, Elmer Fox, Reginald Fox.**

SALTCOATS, Sask. Dec. 23, 10 miles on foot in 4½ hours; temp. 20°; no wind; sunny. 16 species, 463 individuals. Ruffed Grouse, 2; Sharp-tailed Grouse, 7; Ring-necked Pheasant, 1; Gray Partridge, 5; Great Horned Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 3; Black-billed Magpie, 3; Black-capped Chickadee, 19; White-breasted Nuthatch, 1; Bohemian Waxwing, 11; Starling, 7; House Sparrow, 283; Pine Grosbeak, 31; Common Redpoll, 21; Snow Bunting, 66.—**Bill Horseman.**

SASKATOON, Sask. Dec. 26, 23 miles on foot, 200 miles by car; 14 party hours on foot and 23 party hours by car; temp. 21-24°; wind light; overcast; 5 inches of snow; 29 observers in 7 parties. 23 species, 3,921 individuals. Mallard, 9; Common Goldeneye, 2; Pigeon Hawk, 1; Ruffed Grouse, 2; Sharp-tailed Grouse, 46; Ring-necked Pheasant, 17; Gray Partridge, 29; Ring-billed Gull, 1; Great Horned Owl, 2; Hairy Woodpecker, 2; Downy Woodpecker, 4; Blue Jay, 8; Black-billed Magpie, 123; Black-capped Chickadee, 57; Bohemian Waxwing, 296; Starling, 30; House Sparrow, 2,765; Evening Grosbeak, 14; Pine Grosbeak, 55; Common Redpoll, 440; Slate-colored Junco, 1; Oregon Junco, 2; Snow Bunting, 15. (Add: Robin, Dec. 27, 28; Brewer's Blackbird, Dec. 29).— **Bob Folker, Bernard Gollop, Mr. and Mrs. Jim Hogg, John Shadick, Fern Cordrey, Vic Harper, Ted Wedge, Wendy Wedge, Lindy Lou Wedge, Dr. and Mrs. R. M. Bremner, Dr. and Mrs. C. J. L'Ami, Mrs. Laura Rowles** (Montreal), **Peggy O'Neil, Dr. and Mrs. John Gerrard, Jonathan Gerrard, Gwynneth Rowe** (London, England), **Dr. F. E. Waite, Ralph Palmer, Bob Pravda, Ralph Morris, David Morris, George Gerrity, Ross Gerrity, Bob Mills, Frank Roy** (compiler)—**members and friends of the Saskatoon Natural History Society.**

SKULL CREEK, Sask. Jan. 10, 1959, 3½ hours; temp. 48 to 40°. 11 species, 424 individuals. Ring-necked Pheasant, 6; Great Horned Owl, 2; Saw-whet Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Black-billed Magpie, 87; Black-capped Chickadee, 21; Robin, 2; Bohemian Waxwing, 280; Pine Grosbeak, 3; Common Redpoll, 19. (Add: Golden Eagle, 1, Jan. 8; Sharp-tailed Grouse, 14, Jan. 8; Gray Partridge, 22, Jan. 8; Short-eared Owl, 1, Jan. 3; Blue Jay, 1, Jan. 9; Common Crow, 1, Jan. 4; Rusty Blackbird, 1, Dec. 20; Brewer's Blackbird, 1, Dec. 31; Brown-headed Cowbird, 2, Jan. 9; Evening Grosbeak, 1, Jan. 9; Tree Sparrow, 2, Dec. 20; Snow Bunting, 62, Jan. 2).—**Ken Wright, Mrs. H. Borman, George Swain, Peter Swain, Harry Williams, Robert Mann, Betty Mann, Mr. and Mrs. Steve Mann.**

SPIRIT LAKE, Sask. Dec. 26, 8 miles on foot; 8 party hours; temp. 20-25°; wind light; overcast with occasional light snow; 10 inches of snow. 15 species, 148 individuals. Ruffed Grouse, 4; Sharp-tailed Grouse, 1; Great Horned Owl, 2; Hairy Woodpecker, 6; Downy Woodpecker, 8; Gray Jay, 1; Blue Jay, 1; Black-billed Magpie, 6; Black-capped Chickadee, 50; White-breasted Nuthatch, 2; House Sparrow, 20; Evening Grosbeak, 11; Pine Grosbeak, 8; Common Redpoll, 23; Snow Bunting, 5. (Add: Goshawk, 1, Dec. 29; Pigeon Hawk, 1, Dec. 29; Bohemian Waxwing, 10, Dec. 25).—**Joyce Gunn, Bill Anaka.**

SOMME, Sask. Dec. 30, 44 miles by tractor in 8 hours; mostly cloudy; 15 inches snow. 11 species, 95 individuals. Ruffed Grouse, 1; Great Horned Owl, 1; Downy Woodpecker, 1; Northern Three-toed Woodpecker, 2; Gray Jay, 3; Blue Jay, 7; Black-billed Magpie, 4; Common Raven, 1; Black-capped Chickadee, 10; Boreal Chickadee, 5; House Sparrow, 60. (Add: Sharp-tailed Grouse, 9, Dec. 27; Gray Partridge, 13, Dec. 22; Hairy Woodpecker, 2, Dec. 23; Black-backed Three-toed Woodpecker, 1, Dec. 22; Pine Grosbeak, 6, Dec. 21; Snow Bunting, 12, Dec. 28).—**Donald and Ronald Hooper.**

TORCH RIVER, Sask. Dec. 24, 6 miles by team and on foot from farmyard to logging bush in 4½ hours; temp. 22°; wind light; overcast; 12 inches of snow. 11 species, 62 individuals. Goshawk, 1; Ruffed Grouse, 2; Hairy Woodpecker, 1; Gray Jay, 5; Blue Jay, 1; Black-billed Magpie, 2; Common Raven, 9; Black-capped Chickadee, 4; White-breasted Nuthatch, 1; Northern Shrike, 1; House Sparrow, 35. (Add: Sharp-tailed Grouse, 2, Dec. 24; Pileated Woodpecker, 1, Dec. 27; Pine Grosbeak, 9, Dec. 24; Common Redpoll, 10, Dec. 28; White-winged Crossbill, 12, Dec. 24; Slate-colored Junco, 1 (no date); Snow Bunting, 8; Jan. 1).— **C. Stuart Francis.**

WAUCHOPE, Sask. Dec. 26, 13 miles by car, several hours about yard; ground drifting. 4 species, 135 individuals. Sharp-tailed Grouse, 31; Black-billed Magpie, 1; Black-capped Chickadee, 3; House Sparrow, 100.—**John and Marion Nixon.**

WYNYARD, Sask. Dec. 31, 4 miles on foot; wind SW 20 mph. 7 species, 67 individuals. Hairy Woodpecker, 2; Downy Woodpecker, 2; Gray Jay, 1; Black-billed Magpie, 1; Black-capped Chickadee, 9; Bohemian Waxwing, 12; House Sparrow, 40. (Add: Ruffed Grouse, 1, Dec. 22, 25, 29, 30; Ring-necked Pheasant, 1, Dec. 23, 27; Horned Owl, 1, Dec. 26; Blue Jay, 1, Dec. 27; Evening Grosbeak, 4, Dec. 20, 22).— **Dora Bardal.**

YORKTON, Sask. Dec. 26, 87 miles by car in 14 hours, and 21½ miles on foot in 13½ hours; temp. 19°; wind SE at 6; 12 inches of snow. 17 species, 2054 individuals. Goshawk, 1; Pigeon Hawk, 1; Ruffed Grouse, 6; Sharp-tailed Grouse, 82; Gray Partridge, 43; Great Horned Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 1; Black-billed Magpie, 54; Black-capped Chickadee, 22; Bohemian Waxwing, 19; House Sparrow, 965; Evening Grosbeak, 4; Pine Grosbeak, 8; Common Redpoll, 268; Snow Bunting, 576.— **Gary Anweiler, Brother Eugene, Brother Joseph, Ronald Coleman, Terry Coleman, Henry Chilman, Jr., Tom Cursons, Archie Fraser, Art Gellert, Billy Horseman, Dr. Stuart Houston** (compiler), **Roxby Hughes, Bob Pearce, Irving Pearce, Elwood Sharpe, Cliff Shaw, Jeff Smith, Don Swaby, Frank Switzer, Guillain Switzer.**

Annual Report of Whooping Cranes in Saskatchewan, 1958

By **F. G. Bard**, Saskatchewan Museum of Natural History.

Painting by F. W. Lahrman, 1959

Although three adult birds failed to return to the Aransas Refuge last fall, the Whooping Crane picture has been brightened by the increase in the number of young in 1958. Nine young and 23 adults made up the aerial count of 32 reported in the letter of Dec. 5, 1958, from Claude F. Lard, Refuge Manager at the Aransas National Wildlife Refuge. The nine young raised in the wild and one raised by the captive pair at New Orleans make a total of ten young for 1958—giving a great lift to the Whooping Crane population.

The New Orleans pair raised only one young this past year. Counting the two young raised previously, the New Orleans flock now stands at five. A single bird in San Antonio brings the number of captive birds to six, which with the wild flock of 32 establishes a grand total of 38 birds. Without the loss of the three adults which failed to return last fall, we should have had 41 birds— a 25% increase over 1957!

Generally speaking the Whooping Cranes are not as well off for cover as they were a year ago. The very poor run-off and low rainfall of 1958 have had a disastrous effect on our surface waters. This may bring whoopers into areas where we can expect heavier gun pressure. As it is, there is always the risk of a crane being shot along the flyway through error or carelessness. Each fall a number of immature Whistling Swans are shot for geese, and this year several of our banded Pelicans were shot during the hunting season! Because whoopers are continually in similar danger, I never cease to marvel how such a small flock of them can run the gauntlet of hazards along the flyway, and yet arrive safely each year in Aransas!

Spring, summer and fall records of Whooping Cranes in Saskatchewan in 1958 are shown in the following tables. The spring records below were not all field checked, but they all fall within the known area (except Blaine Lake).

Table I—Spring Records, 1958

Date	No. Birds	Place
April 8	3	Govan
April 13	3	Arbury
April 17	3	Katepwa Beach
April 19	3	Penn
April 21	3	Blaine Lake
April 25	5	Pierceland
April 27	2	Benson
May 6-30	1	Simpson (east)

Table II—Summer Wanderers, 1958

Date	No. Birds	Place
May 6, 27, 30	1	Simpson
Aug. 24, 28 Sept. 3, 8, 28	1	Imperial
Sept. 10, 24, 25 26, 29	1	Dafoe-Kandahar
Sept. 29	2	Kandahar
Sept. 30	1	Wadena

Table III—Fall Records, 1958

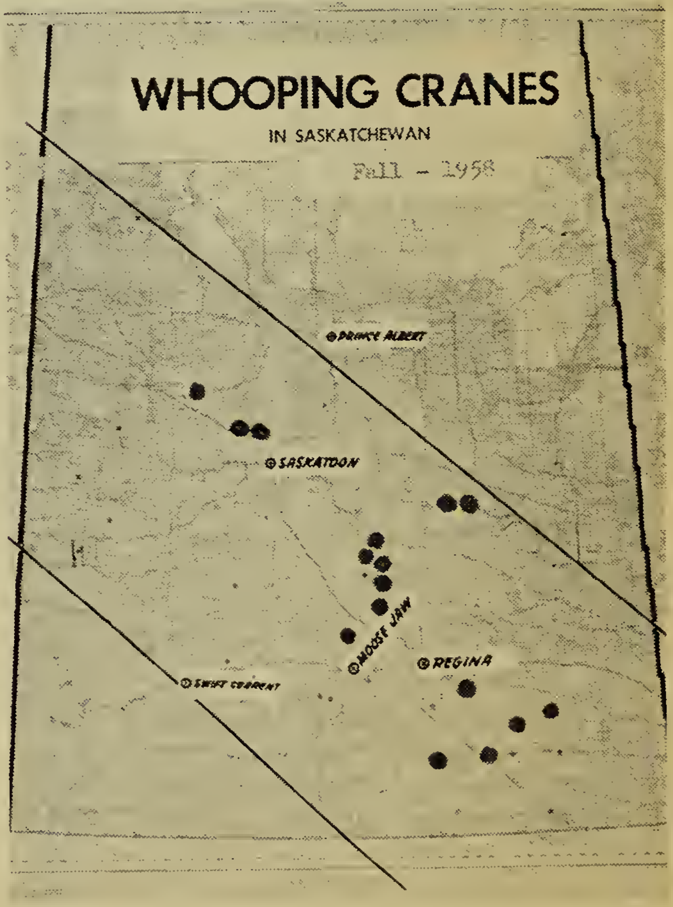
Date	No. Birds	Place
Sept. 30*	3	Imperial
Oct. 1	2 ad.	Imperial
Oct. 1, 28	2 ad.	Last. Mt. Lake (north end)
Oct. 2	1 ad.	Imperial
Oct. 2	1 ad.	Govan
Oct. 3	2 ad. 2 yg.	Ceepee
Oct. 5	2 ad. 1 yg.	Khedive
Oct. 5, 6, 8	1 ad.	Elfros
Oct. 6	1 ad.	Wadena
Oct. 6	1 +1	Gibbs
Oct. 10	1	Creelman
Oct. 11	1	Corning
Oct. 12	2 ad.	Richard (North Battleford)
Oct. 12	2 ad.	Strasbourg
	2	Lajord
Oct. 13	2 ad.	Weyburn
Oct. 15	2 ad. 2 yg.	Buffalo Pound Lake
Oct. 15	2 ad	Govan
Oct. 17, 19	2 ad.	Cymric
Oct. 21, 28	2 ad. 2 yg.	Langham
Oct. 22	2 ad.	Govan (west)
Oct. 25	2 ad.	Strasbourg
Oct. 26-31	2 ad.	Cymric

* It is difficult to separate summer wanderers from migrants, but the fall migration was thought to begin on September 30 at Imperial.

From the summary of reports and of field checks made by Fred Lahrman, it appears that 19 Whooping Cranes (15 adults and 4 young) were observed in the province in 1958.

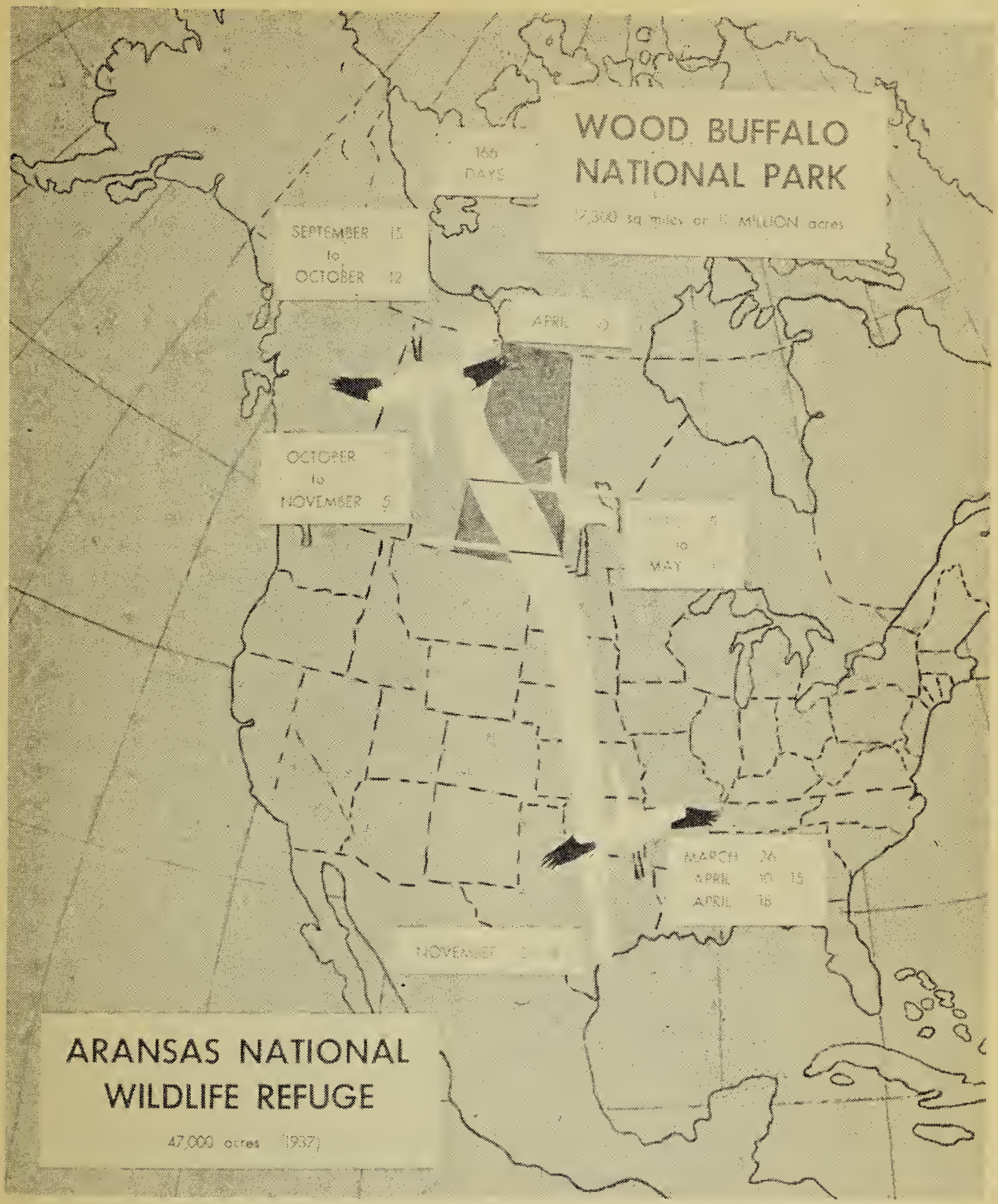
Observers who watch for Whooping Cranes in fall migration will be interested in knowing when these birds come into the fields to feed. The regularity of feeding times is shown in the following observations: Morning feeding—arrival 6.50 to 7.15 a.m., departure 9.15 to 9.47 a.m.; Afternoon feeding—arrival 3.30 to 3.40 p.m., departure 5.04 to 5.07 p.m. However, in 11 observations unusual afternoon arrivals were noted at 1.45 and 2.30 p.m., and unusual departures at 1.20 and 4.40 p.m. The bird observed leaving the field at the unusual hour of 1.20 p.m. had not been seen arriving. The reason for this irregularity was not evident as the birds did not seem to have been disturbed by hunters (in spite of the heavy hunting pressure in the Last Mountain Lake region).

On October 15, two Regina hunters, H. Martz and E. Morris, saw two Whooping Cranes feeding west of Govan near the lake. Nearby they



Sask. Gov't. Photo

WHOOPING CRANES IN SASK., FALL 1958


WOOD BUFFALO NATIONAL PARK
17,300 sq miles or 11 MILLION acres
166 DAYS
SEPTEMBER 15 to OCTOBER 12
APRIL
OCTOBER to NOVEMBER 5
to MAY
MARCH 26
APRIL 10 15
APRIL 18
NOVEMBER
ARANSAS NATIONAL WILDLIFE REFUGE
47,000 acres 1937)

Sask. Govt. Photo

AVERAGE DATES FOR MIGRATION AND APPEARANCES

noticed a country school and decided to report their find for the benefit of the teacher and students. With the use of binoculars each pupil had an opportunity of observing these rare and wonderful birds. The teacher was delighted, for that very morning the class had been discussing the Whooping Crane. Our special thanks to these sportsmen for their educational and considerate act.

I should like to acknowledge further reports of birds that may have been Whooping Cranes. Some of these came from areas outside our present established boundaries, and we must therefore omit these reports until they are corroborated. We nevertheless wish to convey our thanks to the many observers; with your help we shall add new areas to our records. Two-thirds of the records printed above were field-checked; the others have been accepted because they were associated with field-checked records.

First Annual Report on the Prairie Nest Records Scheme

By **E. L. Fox**, Regina

In 1958 the Saskatchewan Natural History Society in co-operation with the Saskatchewan Museum of Natural History instituted a scheme to collect information on nesting birds in the three Prairie Provinces, thus bridging the gap between Ontario and British Columbia where similar schemes are in operation. By the end of 1958 thirty-one contributors had returned 655 nest record cards, giving information on 101 species of birds. A total of 3318 nests and 9275 young were reported.

Nests were reported for these species: Common Loon, Red-necked Grebe, Horned Grebe, Eared Grebe, Western Grebe, Pied-billed Grebe, White Pelican, Double-crested Cormorant, Great Blue Heron, Black-crowned Night Heron, American Bittern, Canada Goose, Mallard, Gadwall, Pintail, Blue-winged Teal, American Widgeon, Shoveler, Canvasback, Lesser Scaup, Common Goldeneye, White-winged Scoter, Ruddy Duck, Red-breasted Merganser, Cooper's Hawk, Red-tailed Hawk, Swainson's Hawk, Ferruginous Hawk, Bald Eagle, Marsh Hawk, Prairie Falcon, Pigeon Hawk, Sparrow Hawk, Ruffed Grouse, Sharp-tailed Grouse, Sora, American Coot, Killdeer, Common Snipe, Upland Plover, Spotted Sandpiper, Willet, Marbled Godwit, American Avocet, Wilson's Phalarope, California Gull, Ring-billed Gull, Common Tern, Black Tern, Mourning Dove, Black-billed Cuckoo, Great Horned Owl, Long-eared Owl, Yellow-shafted Flicker, Yellow-bellied Sapsucker, Hairy Woodpecker, Downy Woodpecker, Eastern Kingbird, Western Kingbird, Eastern Phoebe, Least Flycatcher, Western Wood Pewee, Horned Lark, Tree Swallow, Bank Swallow, Barn Swallow, Cliff Swallow, Purple Martin, Black-billed Magpie, Common Crow, Black-capped Chickadee, House Wren, Catbird, Robin, Veery, Mountain Bluebird, Cedar Waxwing, Loggerhead Shrike, Solitary Vireo, Red-eyed Vireo, Warbling Vireo, Yellow Warbler, Ovenbird, Bobolink, Western Meadowlark, Yellow-headed Blackbird, Redwinged Blackbird, Brewer's Blackbird, Common Grackle, Rose-breasted Grosbeak, American Goldfinch, Savannah Sparrow, Vesper Sparrow, Lark Sparrow, Slate-colored Junco, Chipping Sparrow, Clay-colored Sparrow, White-throated Sparrow, Song Sparrow, McCown's Longspur, Chestnut-collared Longspur.

These records were submitted by W. Anaka, R. Buhr, D. Buckle, Genevieve Belliveau, F. G. Bard, R. Cowell, R. W. Fyfe, G. Fox, E. L. and Reg Fox, D. Gilroy, Joyce Gunn, F. Gregg, the Hubbard family, Kathleen Hodges, A. Hruska, W. Horseman, S. Houston, F. Howe, R. Klimack, L. Lohr, F. W. Lahrman, Roberta Lee, Mamie McCowan, R. W. Nero, J. M. Provick, K. Paton, J. Robinson, W. Richardson, B. Shier, S. Waycheshen, A. Waycheshen. Worthy of special mention for number of records submitted are Bill Horseman (153 cards), Bill Anaka (92), Stuart Houston (79), Glen Fox (44), Lloyd Lohr (35 from Alberta). F. G. Bard, Director of the Saskatchewan Museum of Natural History filed an interesting report on a large mixed colony of White Pelicans, Ring-billed Gulls, Common Terns, and Double-crested Cormorants at Old Wives' Lake. (Since the preparation of this summary, 199 cards for 75 species have come from Victor and Irving Latta, Winnipeg).

The records of all contributors, whether they sent in a large or small number of cards, are important in this scheme. We are therefore urging all of those who helped in 1958 to help again in 1959. To all those who contributed in 1958, nest record cards will be mailed in March. Any others who have not yet submitted cards—and we hope there will be many new contributors this year—should write at once for cards to use during the breeding season.

We are particularly anxious to have additional contributors because many areas in the three provinces have not yet been covered. Very few reports have come in from Manitoba or Alberta, and in Saskatchewan even points like Saskatoon and Prince Albert where there are active natural history societies have submitted no local reports in the 1958 survey. The three main areas with a concentration of records in Saskatchewan are Regina, Kindersley, and Yorkton district. The remaining records are scattered throughout the province, with no complete coverage at any point.

We need to know more about more species of birds, as well as about more areas in the three provinces. To date, no records have been received for the following common species: Gray (Hungarian) Partridge, Burrowing Owl, Short-eared Owl, Common Nighthawk, Brown Thrasher, Starling. We know there are records that have not been submitted; for example, the nests of the Lesser Yellowlegs and Swamp Sparrow seen by almost all members of the society present at the Emma Lake summer meeting were not reported. Species of special interest for which the committee would welcome reports include the Franklin's Gull. Breeding colonies of these typical prairie gulls must be known to some of our readers, and could be reported. In the last **Blue Jay** (December, 1958) we suggested plotting the breeding range of the Western Kingbird if sufficient reports of nests could be obtained. You are urged, too, to send in records for longspurs (on which Frank Roy is working), and for the Canvasback (because of our concern about the diving duck population). Finally, several special requests for nesting information submitted to the **Blue Jay** follow this article—when you submit records in answer to these inquiries, please send duplicate cards to us.

In spite of some omissions, we are greatly encouraged by the initial response to the Prairie Nest Records Scheme. We are confident that the number of records submitted in 1959 will increase substantially as more and more interested people learn of the scheme. If you are not already a contributor, write at once for nest record cards to **Prairie Nest Records Scheme, c/o Saskatchewan Museum of Natural History, Regina, Sask.**

INFORMATION PLEASE

COLONIAL BIRDS — We need more information about the distribution of the following colonial birds in Saskatchewan: Eared Grebe, Western Grebe, White Pelican, Double-crested Cormorant, Great Blue Heron, Black-crowned Night Heron, California Gull, Ring-billed Gull, Franklin's Gull, Bonaparte's Gull, Common Tern, Caspian Tern, Black Tern, Bank Swallow, Cliff Swallow, Long-billed Marsh Wren, Yellow-headed Blackbird. For each species about which you can give us information, please indicate location of the colony (nearest town, land location), size of colony, history of colony (has it existed for a number of years? Is it protected from visitors, predators, shrinking water levels?). **Information to F. G. Bard, Saskatchewan Museum of Natural History, Regina.**

GOSHAWK, PEREGRINE FALCON—An all-out effort to obtain information on nests of Goshawk and Peregrine Falcon is being made this year as part of a programme to determine the distribution of birds of prey in Saskatchewan and to band them. Every effort will be made to check nests reported, and whenever possible adults and young will be banded. I shall gladly send additional information to anyone interested who may be unfamiliar with the habitat and nesting requirements of these birds. **Information to R. W. Fyfe, Saskatchewan Museum of Natural History, Regina.**

BUFFLEHEAD—As a graduate student in zoology at the University of British Columbia I am engaged in a study of the Bufflehead duck. I am especially interested in precise information on the breeding distribution. **Blue Jay** readers may have records that have not appeared in the literature. I should like to ask you to report to me your observations of previous years and to watch for this species in the approaching breeding season. Any precise information on nests or broods of Buffleheads would be useful, but sight records of adult or yearling birds unaccompanied by young are of little value. **Information to Anthony J. Erskine, Dept. Zoology, University of B.C., Vancouver 8, B.C.**

(Please send duplicate cards to Prairie Nests Record Scheme.)

Plant more Fruit Trees to attract birds

By **Mrs. O. L. Wolters,** Tolland, Alta.

Close to our house are two crabapple trees, one a rosy-bloom, the other a Siberian that so many birds seem to relish. Flock of from 8 to 30 or more Pine Grosbeaks could be observed there almost daily for a spell this winter. One day eight Evening Grosbeaks paid us a call. I had never seen more than three at a time before, and for years only one came at a time, so I hope they are becoming more numerous.

Early in the fall, five partridge dined on crabs morning and evening, and what with Blue Jays, Bohemian Waxwings and grosbeaks, needless to say, very few crabapples remained after Christmas. Had we known they'd be so popular, we'd have planted more ornamental apple trees. However, if purchased from a good western nursery, trees bear young, so we are planting a few more this spring. Naturally, they will be near to the house where birds coming to dine can be watched.

Bird Houses

By **F. G. Bard,** Sask. Museum of Natural History

Instructions for building bird houses may be found in many books and pamphlets. Perhaps your library has **How to build bird houses and feeders** by W. E. Schultz and **My hobby is bird watching** by Mary P. Pettit. Or, you can oobtain free two pamphlets which we have used in preparing this article: **Bird houses and their occupants** (Wildlife Division, Dept. of Northern Affairs and Natural Resources, Ottawa) and **Bird houses are fun to build** (Royal Bank of Canada, Regina).* Another valuable source of information, of course, is the friend or neighbour who has already had experience in building bird houses.

A number of species of birds nest successfully in bird houses. All of these nest as single pairs, with the exception of the Purple Martin for which a martin colony house is recommended. H. H. Mitchell (formerly with the Museum) established a colony of martins south of the Normal School in Regina. The house was occupied for several years before being deserted, probably due to constant pressure from House Sparrows. For more than 20 years martins avoided Regina, and they have only recently returned to nest in the city. In the 30's I placed martin houses at Regina Beach and after a period of two years succeeded in having the houses occupied. At that time the closest colonies existed at Raymore about 50 miles northeast. Now they are quite common on both sides of Last Mountain Lake. A colony of martins is a fine addition to any city park, home or summer cottage. Properly constructed and located, there is no reason why martin colony houses should not be successful. Fig. 5a shows an occupied martin house situated in one of the busiest sections of Edmonton.

Many variations from the standard types of houses are possible, but one must keep in mind that good bird houses are built for birds—they should not be toy houses that imitate houses for humans! Fancy, gaudy-coloured houses are less successful than the more practical, protectively-coloured bird houses. One practical suggestion is the use of asphalt roofing (see fig. 3b) which is very flexible. I favour this over and above some of the elaborate pitched roofs where constant problems are experienced as a result of heat and exposure to weather. Another common mistake is making the entrance too small or too close to the floor. Remember that in nesting sites provided by the carpenter birds, the woodpeckers, we often find Tree Swallows using an entrance as high as 10 inches from the floor. Another important factor is ease of cleaning, so that the house can be made attractive for next spring's occupant.

Sometimes special problems must be faced. One year we found that our Tree Swallows had no success in a standard house. When the house was cleaned in the fall we found five dead swallows. Presumably House Sparrows had attempted to take over the house, but not being able to get in, had worried and actually killed the female swallows. Next year we provided additional entrances so that the Tree Swallows could escape attack.

Another special problem was met by using wooden nail kegs to rehabilitate the uncommon Goldeneye duck along Last Mountain Lake. In 1952, the Department of Natural Resources, the Museum, and a youth group (now disbanded) under the leadership of Al Copeman of Regina co-operated in this experiment. The nest barrels were painted in camouflage colours, numbered, and installed in the trees along the lakeshore to replace natural nesting sites in old dead trees washed away during the years of high water. The story was carried in the **Blue Jay** (Vol. XII, No. 2, June, 1954). The project was successful; Goldeneyes increased. Some nests were actually found to have two females. The results of this project were rewarding, and we feel that it should be tried again.

A very useful type of house is the shelter type, consisting simply of a floor with a railing around it to support the nest and a roof over it. At Regina Beach I found that kingbirds, Mourning Doves and robins used this type, and that when it was placed under the eaves it was acceptable to the phoebe.

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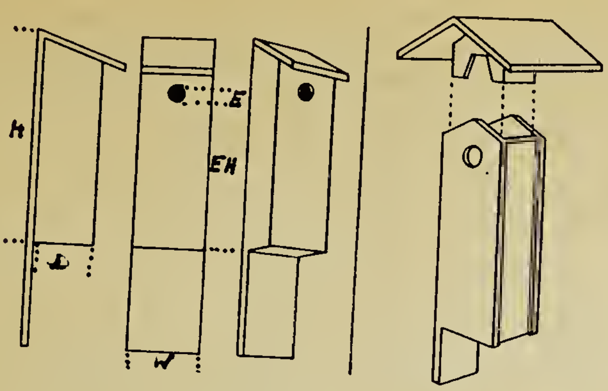
* **Available from Extension Services, Saskatchewan Museum of Natural History, Regina.**



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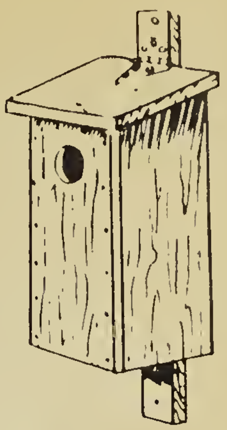

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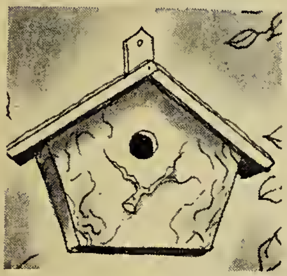

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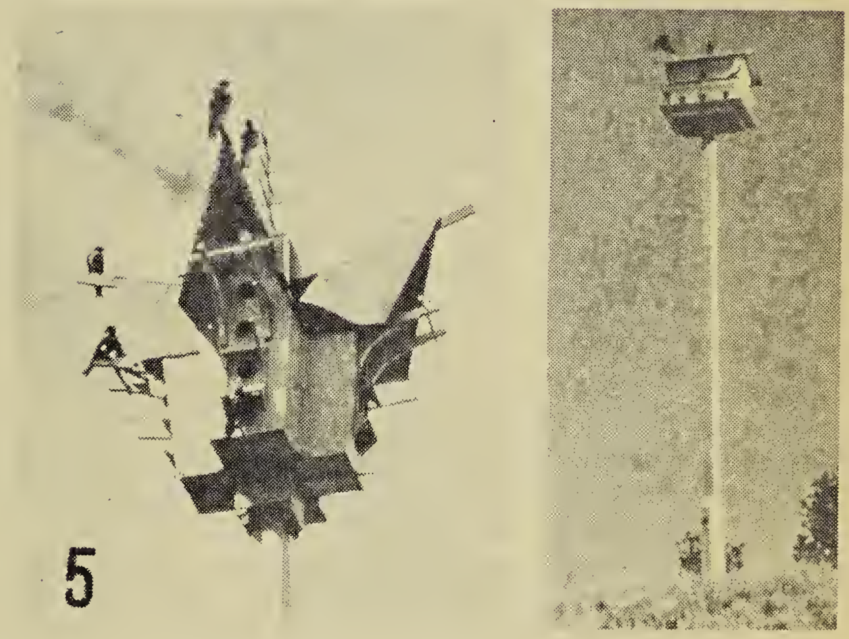
BIRD HOUSE DIMENSIONS

BIRD HOUSE DIMENSIONS

	W.	D.	H.	E.	EH.
1. Tree Swallow	**6**	**5**	**9**	**1½**	**7**
2. Bluebird	**6**	**5**	**9**	**1½**	**7**
3. House Wren	**5**	**5**	**8**	**1***	**6**
4. Robin	**6**	**6**	**9**		
5. Martin	**6**	**6**	**6**	**2**	**4**

***More exactly 15/16" - the size of a 25c coin.**

NOTE — Dimensions given for bird houses vary a great deal. The above dimensions are ones which have proved satisfactory.



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To establish birds successfully one must be patient, for it may be several seasons before you get results. The bird house itself is not the only consideration— an adequate supply of shrubs and trees is needed to provide shelter and food. Difficulties can be expected if House Sparrows and cats have free access. Because of territorial demands, some problems arise as a result of encouraging more birds than would normally live in any given area. These problems, however, are not serious enough to keep us from attracting birds to live near our city homes and summer cottages.

If you have good practical information concerning the construction and maintenance of bird houses or good illustrations, we should like to hear from you. With the receipt of worthwhile material another article can be prepared next season.

PHOTO SHOW

To encourage public interest in natural history preliminary to the A.O.U. meeting, the Museum is having a gigantic photo exhibition of 200 black-and-white photos from its files, **Birds Through the Year,** at the Norman Mackenzie Art Gallery. This will be open Feb. 19-March 15. Be sure to see it.

Where are the Bachelor Canvasbacks?

By **D. P. Olson**, University of Minnesota, St. Paul

The Canvasbacks will be returning to their prairie breeding grounds in early April. When they first arrive and courting activity is high, they are easily observed, and you may be puzzled as you count them to find that there are about two males to every female. This imbalance is confirmed by a large number of observations from Maryland to Manitoba, although the reason for it is not clear.

Males which find mates remain with the females until laying is completed, then leave. Unsuccessful males may be seen for a short time on the breeding marshes, but they soon leave, apparently not to return until the next breeding season. By July, breeding marshes contain hens with broods, but few, if any, drake Canvasbacks.

Duck hunters in breeding areas usually kill three adult females and six juveniles for every adult male. What has become of the adult males we see in spring, and why don't hunters bag more males when males are actually twice as numerous? These are questions that waterfowl biologists are seeking to answer.

Some clues to this mystery are already available. Frequently in summer, large numbers of Canvasbacks are seen on the more remote lakes and marshes. Last summer an airplane check on one of these areas indicated that about 80% were adult males. It is not known whether these are flocks of successful males, unsuccessful males, or both, nor when they arrive, how long they remain, or whether they molt there.

Recently, techniques have been worked out which permit biologists to sex and age the ducks in hunters' bags by examining one wing which the hunter cuts off and saves. Checks on waterfowl bagged last fall by hunters in several prairie areas showed that fewer males than females are taken. This suggests that the male migrates differently. Some males, however, are present in the concentrations of juveniles and hens that gather on large marshes in late summer. One such concentration contained about thirty per cent adult males, but the Canvasbacks which hunters harvested from this concentration included only ten per cent adult males. The reason for this bias against hens and juveniles are yet to be determined. Hunter bag checks from some areas away from the breeding grounds indicate that male Canvasbacks are killed in excess of females, and this may tend to offset the low male kill on the breeding grounds.

It is hoped that waterfowl harvest information will be improved by using the wing technique. During the next two years biologists from the University of Minnesota and the Delta Waterfowl Research Station will be studying Canvasback populations. In addition to field studies on the breeding grounds, they will analyse as many sex ratio observations and examine as many Canvasback wings as can be obtained. Persons who would like to make sex ratio counts or save wings from fall shot Canvasbacks are urged to contact the Delta Waterfowl Research Station, Delta, Manitoba.

UNUSUAL NEST SITES OF AMERICAN ROBIN AND SLATE-COLORED JUNCO.—On May 9, 1958, in Maurice Alcock's farmyard 2½ miles northeast of Pontrilas, Sask., I was surprised to see a female American Robin fly out from the 2-inch opening of a 45 imperial gallon barrel lying on its side in a high-wheeled farm wagon. The wagon box had a plank bottom and 12-inch sides, with the ends open. The end of the barrel was approximately 8 inches from the end of the plank bottom, so this afforded the robin a landing shelf, with the barrel opening slightly to the right of bottom centre and about 4 inches above the shelf. Seen through the 2-inch opening, one-third of the nest was visible, the larger portion being to the left. The nest was incomplete, with the mud lining only about one-third complete. The wagon and barrel were moved the same day, and the nesting disrupted. It seems strange that the robin chose the barrel instead of a more natural nesting site in the thick grove of trees surrounding the farm yard, or the farm buildings.

On June 1, 1958, near Nipawin, I found a Slate-colored Junco also nesting in a metal container. The nest was in a ½-pound tobacco can lying on its side, in the centre of a clearing in a scattered stand of jack-pine and small white poplar. The can was partially imbedded in the ground, about 1/6 filled with pine needles and leaf mould. The front of the can had tipped slightly downward, thus affording complete protection from the elements for the nest. The nest contained 3 eggs of the Brown-headed Cowbird and 3 of its host.—**Maurice Street, Nipawin.**

MOCKINGBIRD IN SASKATOON.—For a fleeting moment in July and for about five minutes on October 14 I saw a Mockingbird reminding me of my native New Hampshire. The Mockingbird became a regular visitor to my yard in November but it was killed by a cat on December 9, 1958.—**Lillian Headley, Saskatoon.**

CARDINAL AT KELWOOD. — I have lived here on a farm close to the Riding Mountains since 1911. During the summer of 1958 I had the pleasure of seeing my first Cardinal with his brilliant red coat and crested head. We saw him quite often during the summer but now, December 30, we see him every day. He seems quite at home in our snowy shelterbelt and I hope he survives the winter.—**W. F. Rosenbarker, Kelwood, Manitoba.**

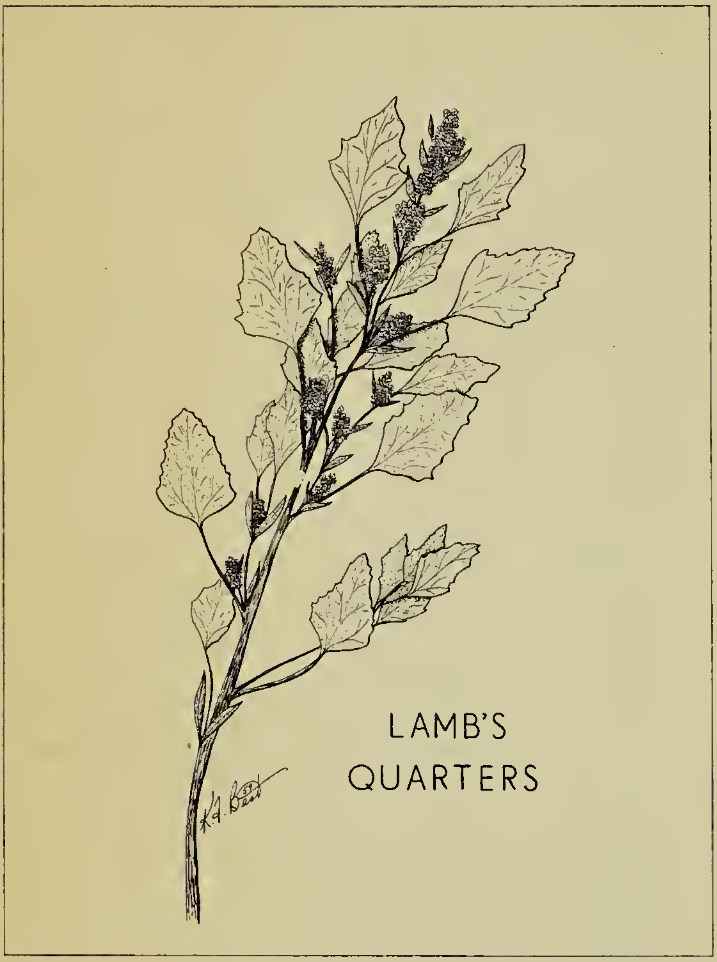
SAW-WHET RARE VISITOR. — **Glen Fox, Kindersley,** reports as a "rare visitor" to the area a Saw-whet Owl seen Jan. 16, 1959. His last previous observation of one was in the winter of 1955-56 when a Saw-whet was found dead along with a Richardson's Owl. Also described as an "unusual visitor" by **Frank Brazier, Regina,** was the Saw-whet which he observed in the Legislative Park, Jan. 11, 1959. At 3.00 p.m. the bird was photographed by **R. W. Fyfe** 20 feet up in a spruce where Brazier had found it at 10.45 a.m. The owl ejected a pellet, then began to feed on prey it had evidently held all this time (but which could not be seen because the owl's feet were hidden by a bough). The recovered pellet contained a redpoll skull, and two feathers which floated down when the owl was eating appeared to be redpoll feathers. Two other records of the Saw-whet (Lumsden, Skull Creek) will be noted in the report of the Christmas Count.

S.N.H.S.
SUMMER MEETING
Moose Mountain Prov. Park
June 13 - 14, 1959

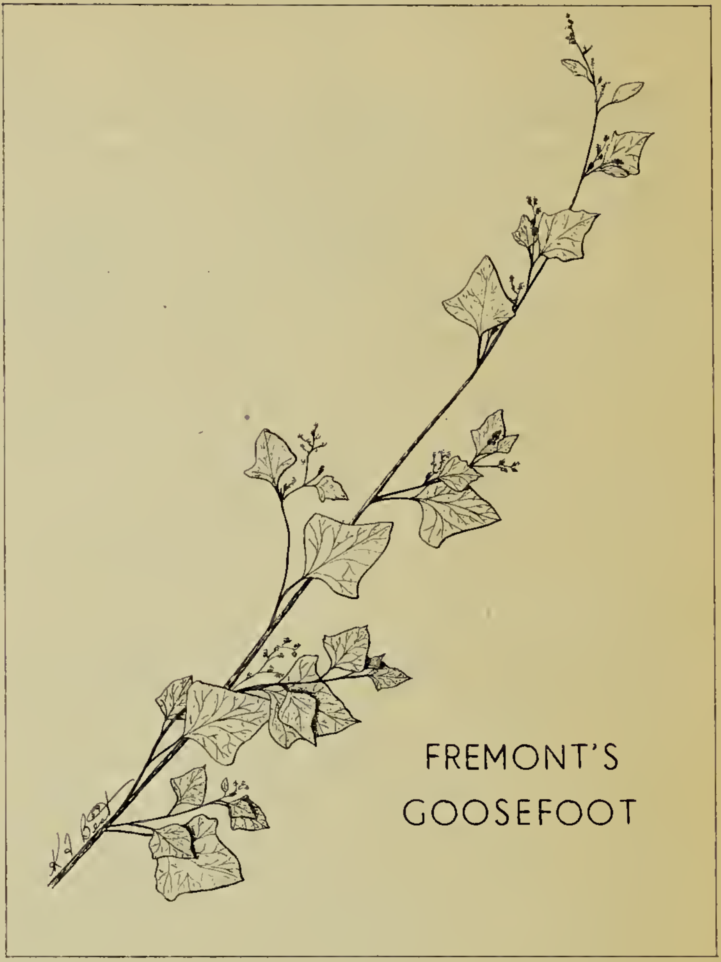
Reservations for the annual meeting should be made early with the Parks Manager, Moose Mountain Provincial Park, Carlyle, Sask. Chalet rooms: $2.50—$4.50 per day; non - modern cabins: $3.50—$4.50 (2-6 persons); modern cabins: $6.50—$9.00 (4-6 persons). Meals will be served at the Chalet at Kenosee, our headquarters for the weekend. Programme chairman: C. Ellis, 820 Valley View Drive, Moose Jaw.

Some Native "Greens" of Saskatchewan

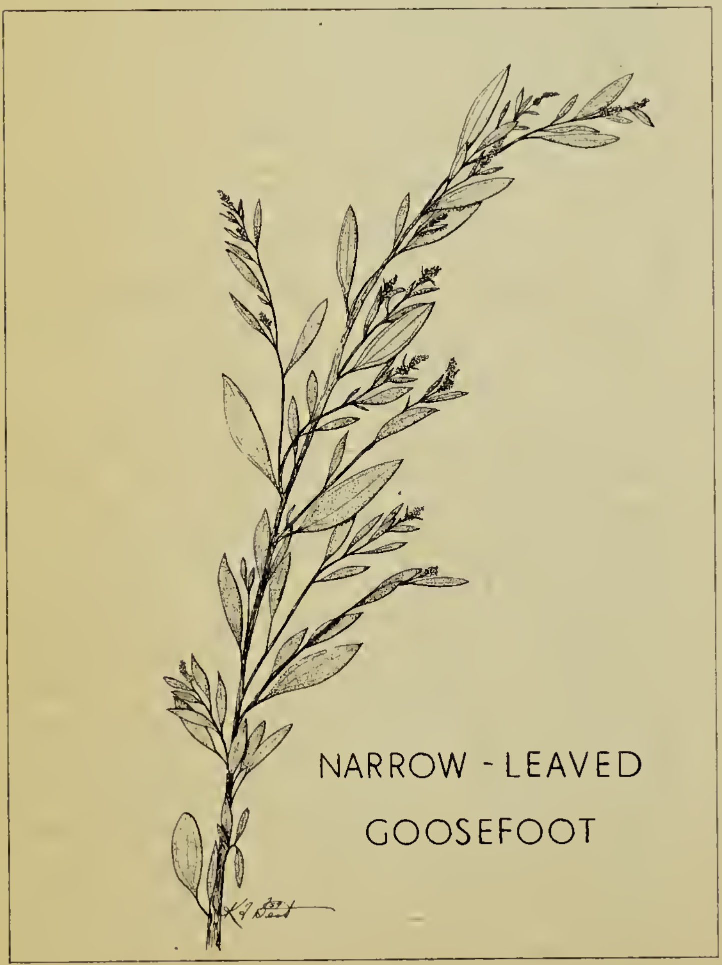
By **Keith Best** and **Archie Budd**, Swift Current



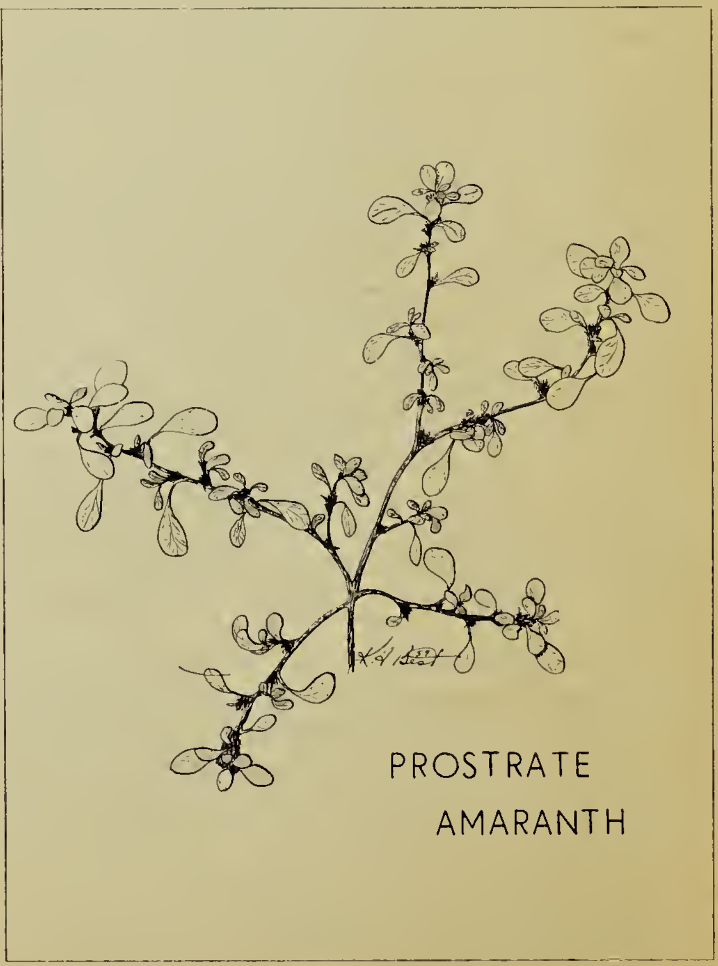
LAMB'S QUARTERS



FREMONT'S GOOSEFOOT



NARROW - LEAVED GOOSEFOOT



PROSTRATE AMARANTH

Not only were the fleshy roots of many plants eaten by the Indian and early settlers, but the foliage of many plants was also used. Like us, the early inhabitants realized the value of "greens" in their diet and found many plants to supply this important need. Probably the one that comes most readily to mind is Lamb's Quarters, *Chenopodium album*, which still forms an article of diet for many farm families. The young plants, when boiled, can not be distinguished from spinach and are every bit as good and nourishing. Most of the Chenopodium genus are edible and also tasty. Fremont's Goosefoot, *C. Fremontii*, has smaller and much thinner leaves than Lamb's Quarters and is not nearly as plentiful but thrives in shady locations, under bushes in ravines and along watercourses. Narrow-leaved Goosefoot, *C. leptophyllum*, has narrow leaves, very mealy on the underside and slightly mealy above, and is fairly common in areas of sandy soil in the southwest portion of the province. While somewhat coarser than the previous two species it is nourishing and edible.

The Amaranthaceae or Pigweed family is closely allied to the Goosefoots and two of its members are palatable as greens. These are Tumbleweed, *Amaranthus albus*, and Prostrate Amaranth, *A. graecizans*. Tumbleweed is a bushy, whitish-stemmed, much branched weed which was found on badger mounds and disturbed places on the prairie. It was the first invader of homestead fireguards and when mature and dry would break off and roll in the wind, distributing its many seeds. Prostrate Amaranth was also a plant of the disturbed soil and became a very persistent weed in farm gardens. It is a reddish-stemmed, fleshy plant with dark green, shiny leaves, much darker green than Tumbleweed, and it grows prostrate and spreading on the soil.

Not only were the leaves and stems of these plants cooked but the seeds were also used by the Indians as food, especially those of the Goosefoots. Practically any plant of the Goosefoot family is edible except perhaps Greasewood and Halogeton, which both contain poisonous properties.

A New Plant Record for Saskatchewan

By **Charles D. Bird**, Oklahoma State University, Stillwater

During the summer of 1957, I worked with the Canadian Wildlife Service carrying out research on my M. Sc. thesis (Vegetational changes as related to waterfowl habitat in artificial lakes of southwestern Saskatchewan, Canada. Oklahoma State Univ., 152 pp., 1958).

On June 20, 1957, I collected *Crepis atribarba* Heller var. *atribarba* (965) along the north side of a high hill at the southwest end of Cypress Lake. The plant was associated with *Galium boreale* L. (962), *Comandra pallida* A.DC. (963), *Senecio canus* Hooker (964), *Zygadenus gramineus* *Rydb.* (966), *Chamaerhodos erecta* (L.) Bunge var. *nuttallii* T. & G. (967), *Campanula rotundifolia* L. (968), and *Linum lewisii* Pursh (969). Identified by Dr. Bernard Boivin, Botany and Plant Pathology Laboratory, Department of Agriculture, Ottawa, the specimen is now in the herbarium of that department.

The species was first described by Heller in 1899 (New and interesting plants from western North America—V. Bull. Torr. Bot. Club 26: 312-315) from material collected in 1896, at Lake Waha, Nez Perce County, Idaho. In 1938, Babcock and Stebbins (The American species of *Crepis*. Carnegie Inst. of Washington Pub. 504, 199 pp.) proposed that the name be changed to *Crepis exilis* subsp. *typica*. They recorded the range as "British Columbia to Alberta, south to the Blue Mountains of Oregon, and in the Rockies to Colorado". In their detailed account of distribution, the nearest record to the present one was a specimen collected by Macoun in 1884, from the Cypress Hills, Alberta. According to their records this was the only known collection from Alberta.

The species is not recorded from Saskatchewan in Breitung's recent flora (Amer. Midl. Nat. 58: 1-72, 1957).

Post-Glacial Forest at Kayville Uncovered

By **Joyce Dew,** Saskatchewan Museum of Natural History

In October, 1958, evidence of a post-glacial forest was unearthed on Jack Scrimbit's farm at Kayville, Saskatchewan. Kayville lies in a rolling prairie region not far from Avonlea. In the area are many circular depressions and knolls comprising knob and kettle topography of glacial origin, formed as a result of the melting away of blocks of ice buried in glacial till. Since most of these depressions have no outlet they filled with sediments, hence the many sloughs in the area today.

One of the shallow depressions on the Scrimbit farm was selected as the site of a dugout. The contractors, the Watson brothers of Avonlea, while excavating at a depth of 12 feet, found a log a foot in diameter which was as fresh in appearance as if it had only recently fallen into the mud. This was the discovery which brought Bruce McCorquodale and Albert Swanston from the Saskatchewan Museum of Natural History to investigate. They spent several weeks in the area and halted operations only when the onset of winter made it necessary. Much material was collected and brought back to the Museum for further study. Samples have been sent as well to scientists in other museums.

The log and other specimens were found in a layer of gyttja, pronounced "gea-cha" (a clay-like material composed of a high percentage of organic materials). This gyttja was in a bed over 8 feet thick and 12 feet below the surface. The gyttja when first uncovered gives off a strong odor resembling hydrogen sulphide, is rubbery in texture, grey-black in appearance and may be peeled off in layers. Embedded in the layers and pressed between them are almost perfectly preserved plants and animals. Pond weeds, moss and grass retain their natural color; there has

Photo by R. W. Fyfe

MR. JACK SCRIMBIT PEELING LAYERS OFF A CHUNK OF GYTTJA FROM THE SITE.

Photo by R. W. Fyfe

MR. SCRIMBIT AND SON, GORDON, EXAMINING ONE OF THE LOGS DISCOVERED AT THE SITE.

Photo by R. W. Fyfe

CLOSE-UP OF PONDWEED IN GYTTJA FROM THE SCRIMBIT FARM.

been little decay and no fossilization has taken place. Insects are found pressed between the layers with fragile wing parts still intact. Snail shells, cones and needles of coniferous trees, and manure of plant-eating mammals are plentiful in the site. The skeleton of a rabbit, a log chewed by a beaver, and the egg of a bird are evidences of vertebrate life.

What is the significance of this find? We are now awaiting the Carbon-14 dating and the pollen analysis which will tell us the age of the site and of the vegetation which grew there. In the meantime it is thought that the site is of post-glacial origin anywhere from 5,000 to 12,000 years old. Relatively little is known of plant and animal life as it became re-established after the retreat of the glacier, and this find may tell us much. The carbon dating will enable us to place this site in its proper geological sequence. From the pollen analysis we shall know what plants grew at that time. Since the gyttja is deposited in well defined layers it will be possible to determine the succession of plant growth which occurred there. This in turn may reveal the climatic cycles of wet and dry years on the prairies and might provide a clue for forecasting future cycles.

There was a somewhat similar find in 1940 in a peat bog near Herbert, Saskatchewan. The material there was preserved in peat and was carbonated at 10,050 ± 300 years. Spruce cones, moss, seeds of a pondweed, snails and bark of a conifer were found there. Materials from both these sites are at present on display at the Museum.

Following the announcement of the discovery in the local press, over radio and TV, more reports have come to the Museum about twigs and branches found in wells and other excavations in the district. These reports will be investigated and it is hoped that readers who have knowledge of similar sites will write to the Museum.

PINK SASKATOONS

By LAD MARTINOVSKY, Gerald, Sask.

In July 1958 while picking saskatoons we came upon a row of pink coloured ones growing along a fence at the side of the road. From the car as we drove along they appeared to us like some flowering shrub. When we examined them more closely we discovered that they were really pink saskatoons. All the other saskatoon fruits in the area were dark in colour. We picked a gallon of these berries, canning half of them and putting the rest in the deep freeze.

Last fall we dug up a number of roots which we buried for the winter and will plant next spring. I have heard of white saskatoons being found. Would a person who has white saskatoons like to exchange some roots for the pink variety?

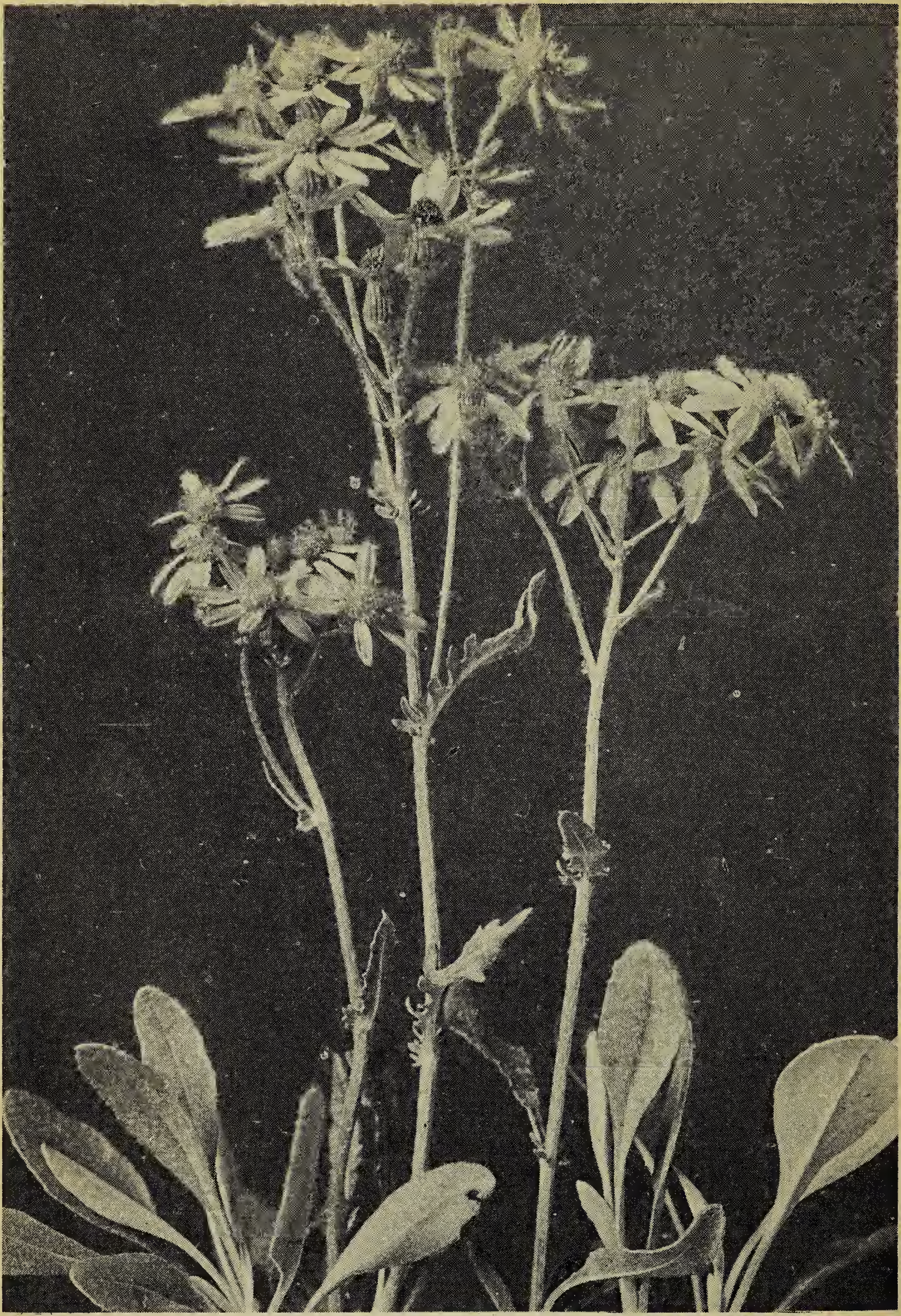


Photo by W. C. McCalla

SILVERY GROUNDSEL, *Senecio canus* **Hook.**

A dozen or more *Senecio* species are found in our area and they show considerable variation in appearance and choice of habitat. This silvery one likes dry hillsides where it flowers in the spring. Stems are usually 12 to 16 inches high; they and the leaves are white-woolly, the flowers bright yellow. The plant might be called *neat,* and the combination of silver and gold is attractive. — W. C. McCalla, Calgary, Alberta.

Boys' and Girls' Section

Edited by **Joyce Dew**, Saskatchewan Museum of Natural History, Regina

Prize Winner

Jacob Jmaeff from Kamsack receives a prize for his series of observations. Jacob has contributed in the past and we hope he continues to do so in the future for his observations are good and make interesting reading. Because of the shortage of material received for this issue, only one prize is being given and our section has only three pages. Let's have more entries and fill five pages of the June issue.

Doreen Jasper who spends a good deal of time in the Museum is always willing to help out and we would like to thank her for supplying the sketch of the Bull Snake.

We did have a nice letter on "Winter Birds" but there was no name with it. We would like to hear from the person who wrote about feeding winter birds so that the story can be included in a future issue.

Contest Rules

Any young person may submit material for this section of the **Blue Jay**. The entries must be first-hand observations in the form of letters, stories, poems, black-and-white sketches or photographs. Letters and stories should not exceed 500 words. All entries must be accompanied by the name, age and address of the sender, and the name of his or her school.

Two or more book prizes will be awarded with each issue of the **Blue Jay**. Teachers who send in entries from their pupils may also qualify for a prize. Winners will be sent a list of books from which to select their prize. Instead of selecting a book prize the winner may select a three-year membership in the society and receive twelve issues of the **Blue Jay** free.

Share your experiences with others. Send in your nature observations. Entries should be addressed to Boys' and Girls' Section, **Blue Jay**, Miss Joyce Dew, Saskatchewan Museum of Natural History, Regina. The closing date for the next issue is April 15, 1959.

Attention Teachers and Group Leaders

Your co-operation is needed in order to maintain the quality of the Boys' and Girls' Section. Bring the attention of this page to interested children or have your entire class send in entries from which we can select material. If the material you send in is not used and you want to know why, write the editor of this page and an evaluation will be given. Suggestions for making nature notes and for sketching from nature are included in a booklet "How to Conduct a Nature Study Group". This booklet may be obtained free of charge from: Extension Services, Saskatchewan Museum of Natural History, Regina. We will be interested in hearing from any teacher or youth leader who wishes ideas for nature study activities. If you in turn have any suggestions or comments about the Boys' and Girls' Section, please let us hear from you.

Nature Observations From Kamsack

By Jacob H. Jmaeff, age 13, Kamsack, Sask.

Double-decker Nest — The second Yellow Warbler nest I ever discovered gave me a great thrill. This nest was a double-decker. This happens, I understand, when a Cowbird lays an egg in a Yellow Warbler's nest.

Our class discovered the nest last October while on a nature hike. This nest was on the north edge of a small bush which had a small slough to the south. The nest was beside a stubble field. The warbler's nest was about four feet off the ground situated in a fine rose bush. Around this wild rose bush were wild raspberries, various weeds, various undergrowth and a woodcutter's brush pile.

The warbler's nest was built of grass and hair. Upon examination the bottom layer held one cowbird egg plus one warbler egg. The second layer held nothing, which could indicate a successful brood.

Deer at Madge Lake—Among the tamer animals at Madge Lake are the White-tailed Deer. When going west from Madge Lake one should try the side road which leads past the large aluminum Bible Camp hall. This side road is just a detour and leads to the regular highway. On this road, in the past two years, our family has seen about fifty deer. They are in groups of three most of the time, usually two adults and a brown, white-spotted fawn.

Two years ago a yearling deer came to Ministik Beach at Madge Lake and romped with the children there. The deer nudged the youngsters and was splashed upon. After a few minutes it scampered away.

To date I have no more information on this beautiful deer.

The Blue Jay—Upon making various queries about Blue Jays, I have found they were common in our district about twenty years ago. Now Blue Jays are rarely seen.

I saw my first Blue Jay last September in a small aspen poplar bush. It was in a tree as the wind swayed the trees to and fro.

I identified the Blue Jay by three main field marks. The Jay was blue all over, had a blue crest and white wing bars.

I watched for the Blue Jay for many days but never saw it again.

Northern Pike—Last August, while trolling in Laura Lake, Manitoba, Dad said he had a fish. We stopped the outboard motor and Dad began to reel in. Then out of the green depth emerged four Northern Pike. One was on the hook and the others followed. All were about the same size, fourteen inches. As soon as they saw the boat the three hurried away. This does not happen often and I suppose they all wanted the bait.

Dad told me then of how he caught two fish on one hook. He was fishing in the Assiniboine River when he felt a tug. Upon reeling in he saw a small pike on his hook with an enormous pike biting its mid-section. When trying to land them Dad said they broke off and swam away. As far as he could see they did not fight again.

A Frog's Fate—One hot August day, while fixing fences, Dad heard a strange squeaking sound. Upon investigation he found a Garter Snake trying to consume a frog. The frog was about four inches long and the snake about twenty-four inches long. The snake was trying to eat the frog head first, but was having a difficult time. All the time the frog was squeaking. Dad quickly pinned down the snake, and to his amazement the frog popped out, unharmed. The snake struggled and glided away. The frog then hopped quietly away.

Photo by Glen Fox

COMMON SNIPE taken at about eight feet without a telephoto lens, Kindersley, August 19, 1958

Nature Observations From The Pupils of Omand School, Kinistino, Saskatchewan

The pupils at Omand School have a bird feeding station. Linda Beaulieu tells about the trouble they are having keeping the food from blowing away and the snow from covering it. Perhaps some of our readers can tell how they solved this problem. Brenda Gudelot writes about building a bird feeding tray at home: "One day, daddy, my sister and I were talking about how to help birds when they can't find food to feed their babies or themselves, so we decided to build a feeding tray. We got a short board and some nails and three lids off some old cans. We put the lids on the board and hammered the nails through the lids and into the board. After we had finished hammering the nails, we put some crumbs in the lids. We set it outside and not too soon after, we saw about four Black-capped Chickadees eating the crumbs."

A skunk visited the farmyard when Barry Warbis was tying up the cows and got shot as a result. Another casualty of the shotgun is an eagle which Marlene Hills wrote about: "The eagle had a short, curved bill. Its claws were sharp and pointed. It was black and brown in color. The eagle's wings when stretched out, were about six feet wide. I read a lot about birds, but I still do not know what kind of eagle it was. It is very, very unusual for an eagle to be in this part of the country."

From Marlene's description the eagle is probably an immature Bald Eagle. The adult Bald Eagle has a snowy white head and tail. The immature is totally dark brown and black. Golden Eagles are generally a dark brown color with white marks underneath the wing and a faint white strip across the tail. Golden-brown feathers on the back of the neck give the Golden Eagle its name.

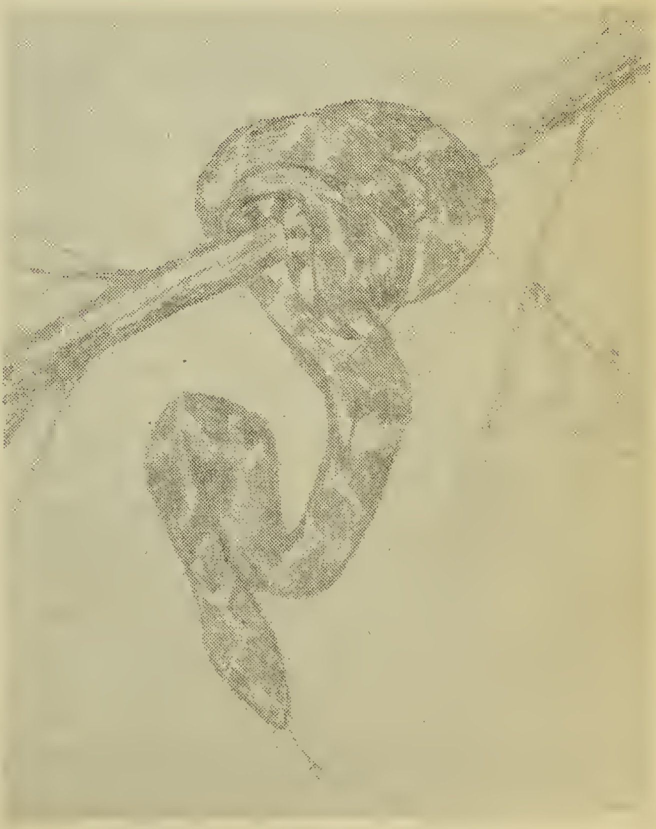
Because of their rarity and beauty every effort should be made to protect these birds. Besides this, it is against the law to shoot them. The Museum is interested in receiving reports about eagles which are sighted in the province.

While on a nature hike with the rest of the class, Gary Hills made the following observations: "First we saw birds and animals doing different things but the best thing I liked was the Killdeer and its nest. The Killdeer is about ten inches long. Its legs are long and straight. The nest is just a little hole in the ground. The Killdeer's eggs are a darkish white with black spots on them.

"When we came near, the mother Killdeer limped away as if she was hurt and trying to lead us away. When we went away the mother Killdeer waited for a couple of minutes and then she flew back to the nest."

Beverly Beaulieu was surprised to see what a cat was doing with the mouse it caught. She peeked into the cellar and found the cat playing with the mouse.

A letter about tame hawks comes from Gail Gudelot. The hawks were captured when young and were fed meat scraps, bread and water. "Then one day while Brenda and I were feeding chicks," Gail writes, "we heard a noise outside. We ran outside and saw one of the hawks trying to kill a chick. After we scared the hawk away daddy came out with a sling shot and was going to scare him so he shot and hit the edge of the hawk's wing but never hurt him. Then a few weeks later the hawks flew away and we haven't seen them since."



BULL SNAKE by Doreen Jasper, age 15, Regina, drawn from a captive snake at the Saskatchewan Museum of Natural History.

S.N.H.S. Brief re: Protection of Birds of Prey

(Continued from page 3)

ogy it is increasingly difficult to classify any living creature as harmful in its natural habitat. Gradually man is learning that only at his own eventual distress or peril can he tamper with that delicate and shifting inter-relationship of soil and water and vegetation and wildlife which is called nature's balance. In past decades much federal and provincial legislation has been directed towards the preservation of these many aspects of our natural heritage, but our predators are still condemned by a deficiency in the laws of Saskatchewan. Two years ago the province of Ontario enacted a statute which is regarded throughout America as a model law in this regard. During the past year many states in the U.S.A. have followed suit. Saskatchewan now has the opportunity of again demonstrating its leadership in the passing of progressive legislation by becoming at this session the second province in Canada to introduce such a desirable law.

Since early times, largely in ignorance, hawks and owls have been labelled as "bad" or "harmful". Slowly, however, man has learned that not all these avian predators indulge in the same habits and diets. The large wide-winged soaring hawks which feed almost exclusively on insects and rodents are now recognized as among the best friends the farmer has. On such grounds, Saskatchewan already affords legal protection to these hawks.

In actual practice this legislation does not afford the protection that it intends to give the so-called "beneficial" hawks. Unless all hawks are protected, people who do not know the hawks are more likely to shoot the buteos which perch conspicuously in the open than the smaller long-tailed hawks which may prey extensively upon smaller birds, but which are not often seen since they commonly perch under cover in wooded areas. The very fact that five hawks and two owls are **not** protected imperils all the other extremely valuable predators found within the borders of Saskatchewan. Partial protection is not an intelligent conservation practice, primarily because the average person cannot distinguish between one species of hawk or owl and another. About a decade ago when the state of Virginia decided that only the goshawk might be regarded as detrimental to the public interest, a bounty was offered for these birds. Of the 9,540 hawks destroyed and presented for reward, exactly one was a goshawk—9,539 errors in identification!

Shooting pressure has obviously had a serious effect on some of these unquestionably beneficial species. The Ferruginous Hawk is now thought of as an uncommon buteo, restricted to a few localities in the province. Yet the naturalists reporting in the early years from across the province refer over and over again to this most beautiful and useful of our buteos. Another species in danger of extinction because of shooting is the trusting Great Gray Owl, fully protected by our existing laws but still being destroyed as "vermin" although it is almost as rare today as the Whooping Crane.

Partial protection is also unsound because all hawks and owls have a vital function to perform in the balance of nature. While those species of hawks and owls now unprotected by legislation in Saskatchewan do prey on other birds, the taking of birds in this way is one natural way of controlling their numbers so as to maintain a balanced and therefore healthy wildlife community. These hawks and owls can very rarely be accused of competing directly with man's own economic welfare.

No one can now deny that predatory birds are essential and irreplaceable elements in the natural scheme of things. It must then be agreed that their continued persecution and the lack of legal protection for them would be detrimental to the welfare of associated wildlife and indeed to man himself. These statements, of course, allude to the wild natural condition under which hawks and owls exist. There are certainly various unnatural situations which the presence of man has produced and in which the occasional predatory bird may compete with and thus be harmful to man's interests. The obvious condition where this applies is the farm, game farm or other property on which poultry or game birds are bred and kept. The depredations which are bound to occur at times must be stopped. Such an occurrence involving specific damage to poultry is the only instance where activity of predators could possibly be harmful to man. Keeping poultry properly penned is indubitably the prime answer to such a problem but in certain instances the destruction of the avian predator, almost invariably a single individual, will be necessary. However, every farmer should keep in mind that the occasional loss of poultry to hawk or owl will usually be offset by the many benefits derived from the presence of these predators which also remove vast quantities of grain-consuming mice, rats and crop-damaging grasshoppers.

Another objection which might be propounded against the blanket protection of hawks and owls is concerned with man's desire to reserve to himself the annual surplus of wild game-birds. Competition between man and the predator for game species is much less significant than has been thought in the past. Science has demonstrated that the population of predatory animals is kept in close harmony with the population of their victims, and the more abundant the one is, so it is with the other. There is no valid reason to believe that if the birds of prey were drastically reduced, there would consequently be an increase in the quantity of game birds. Indeed in some carefully studied areas quite the reverse has been the case. Serious diminution of rodent-eating hawks has been accompanied by an abrupt drop in other bird populations, especially those nesting on the ground, on account of the increase in egg-eating and nest-destroying animals.

It is probably not necessary to remind the reader that there is a major and steadily increasing segment of our citizenship which is comprised of persons who are aware of our natural resources, who deplore the diminishing quantity and increasing inaccessibility of our wildlife, and who cherish the privilege of watching birds or other animals merely for the pleasure which the sight of a wild and perfect creature can bring to the observer. Very few people are scientists and relatively few are active hunters, but a great multitude thrill to a glimpse of unspoiled nature. Wildlife can only be regarded as the property of the public at large.

In the belief that sportsmen, farmers, and general public alike appreciate the immense value, both material and aesthetic, of the vast majority of our predatory birds, the Saskatchewan Natural History Society recommends that:

> Every bird of prey (eagle, osprey, hawk and owl) should be protected, except that the owner of poultry or other domestic animals and the members of his immediate household may destroy by shooting any hawk or owl which is doing real damage to the said poultry or other domestic animals.

The implications of this proposal are obvious. When such a law has been enacted in Saskatchewan, it will mean that the interests of the individual farmer or landowner or occupant are protected at all times against those few birds of prey which are found attacking his poultry. It would also mean that the birds of prey themselves, which an ever-increasing majority of our population understand and value, will be protected from persecution. It will mean that an enlightened Saskatchewan will be helping to assure itself of a perpetually healthy and thriving natural scene. It will also mean that the obviously invaluable mousers among the hawks and owls will be guarded against the shooter who mistakes them for "chicken-hawks". Saskatchewan farms and the outdoors generally will profit from an up-to-date realistic attitude on the part of its legislators.

These proposals received the unanimous approval of our society at its annual meeting in Saskatoon during October, 1958. Previously many smaller constituent societies had passed similar resolutions. We are gratified with the considerable and enthusiastic assistance offered by executive members and local branches of the Saskatchewan Fish and Game League. We hope that our major farm organizations will concur with these suggestions and give just as emphatic support as the Alberta Federation of Agriculture and the Farmers' Union of Alberta are giving to similar legislation in our neighboring province.

Nature Photography

By **Hans Dommasch,** University of Saskatchewan, Saskatoon

Nature offers a world of unique beauty free to every living being. To discover and marvel at all this you need neither wealth nor possession, only simple insight and understanding. To anyone interested in nature, nature photography is an exciting hobby. If you know how, you may with your camera bring home evidence of all the wonders of nature which you may share with others. Your appealing shots of animals can help the cause of conservation and your hobby can be of assistance to scientists and biologists.

Shooting with a camera can bring you as many thrills as actual hunting but it requires much more skill, patience and knowledge. A good rifle shot can bring down game even at a distance, whereas at the same distance it would be impossible to get a picture at all. The wildlife photographer has to know the habits of his subjects. He must be able to judge distance. He must learn many tricks in handling his light-sensitive equipment. Experience and careful observations are necessary before one can become a good wildlife photographer.

Last summer I decided to try to take a photograph of a beaver. Before I was ready to make my first attempt I spent two evenings down by the beaver lodge observing the habits and behaviour of the beaver family. How could I trick the beaver into posing for my picture? Unfortunately the photograph could only be taken at night which made estimating the distance and focusing difficult. After careful observation I selected a spot where a beaver should come, sooner or later, on his way to the woods. I decided to cut down a small tree and plant it right in the path which I hoped the beaver would take. The camera was set up on a tripod, along with two flash lights. Five hours later the photograph, shown below, was obtained. During the waiting period I watched the beavers both at work and at play, thus learning more about the animals I was photographing.

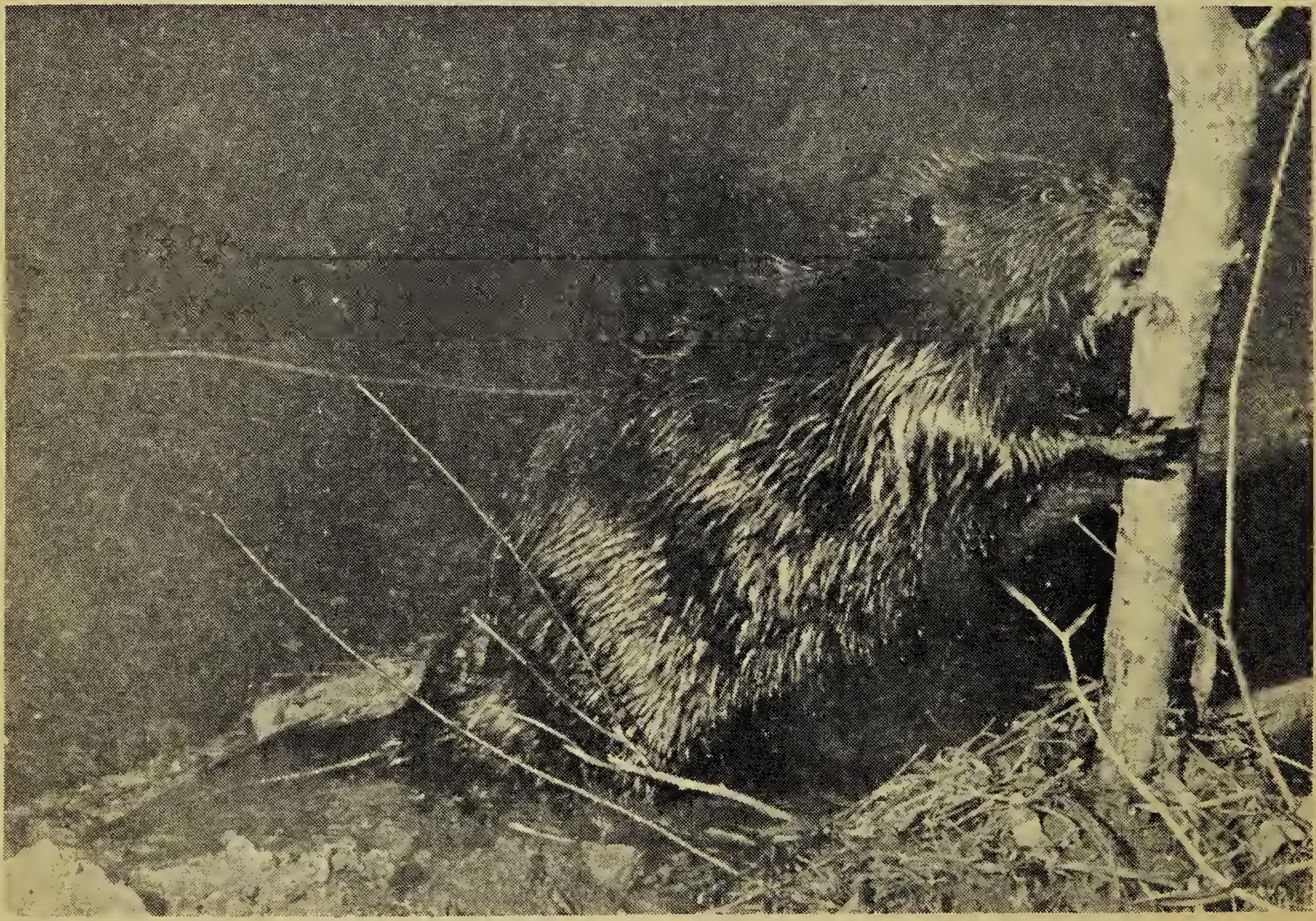
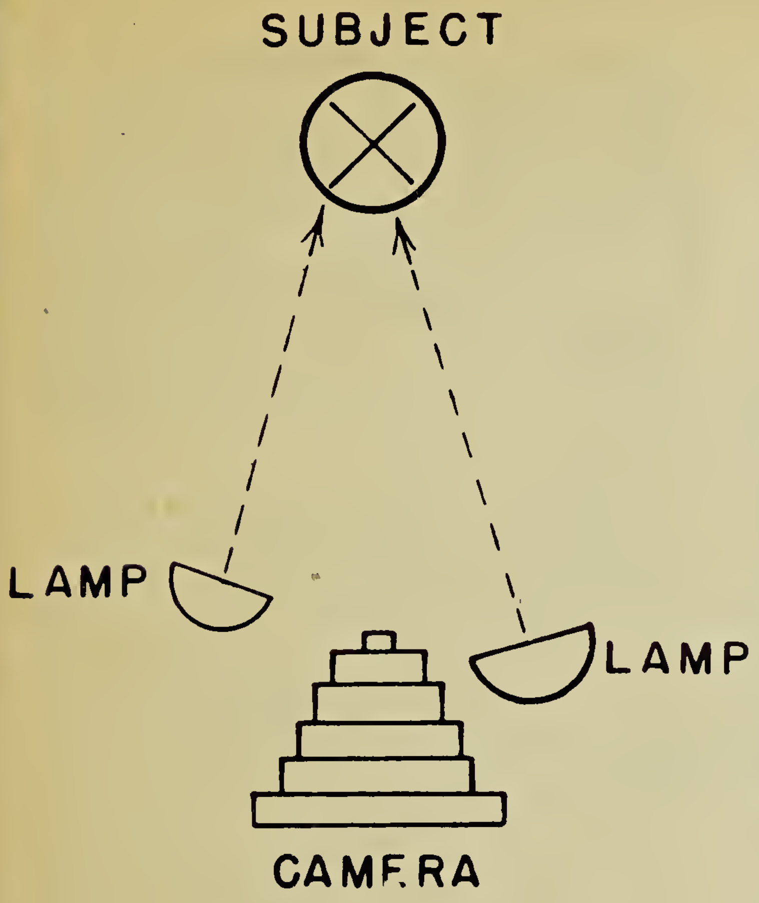


Photo by H. Dommasch

BEAVER, photographed at night using fast panchromatic film and two number 22 flashbulbs.



Set-up for taking the beaver photo at night with fast panchromatic film and two No. 22 flashbulbs.

FIRST RULES IN NATURE PHOTOGRAPHY

Here are a few rules to ensure better results and to make your new hobby of nature photography more enjoyable.

1. Patience! Patience!
2. The photographer's first concern should be for the animals' welfare, not for the obtaining of a photograph regardless of the cost.
3. Much attention should be given to placing your camera or blind. It may take two or three days to move the blind close enough to the subject.
4. If taking pictures at a nest the blind or camera should be moved only when the bird is away from the nest. The camera should be higher than the rim of the nest.
5. Focus accurately and stop down the lens as much as the light conditions will allow to obtain the maximum depth of field.
6. If you intend to take pictures from a hide (blind) you should have an assistant. When the assistant walks away the animals (especially birds) seem to think that the hide is empty.
7. Patience! Patience! Patience!

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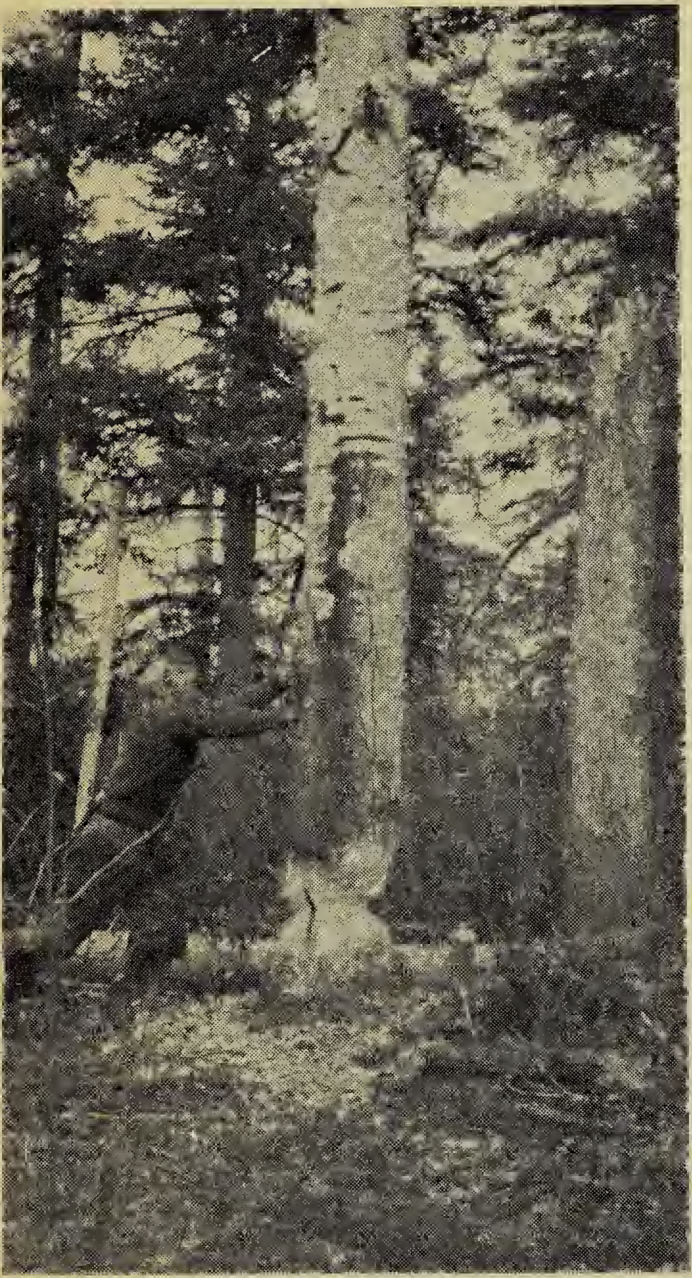
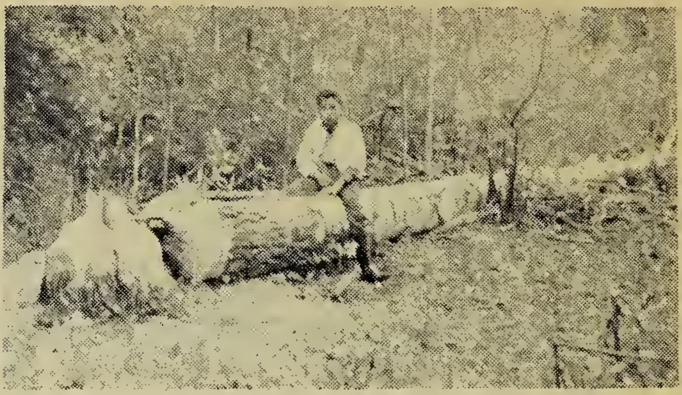
Mammal Notes

Beavers Do Cut Down Big Trees

By **F. H. Gummerson,** Flin Flon, Man.



The accompanying pictures were taken about ten years ago but I thought they might be of interest to show that beavers do cut down big trees. This tree, still standing in the first picture which was taken in October, is 22 inches in diameter. The second picture was taken on June 1 of the following year. Notice that the bark has been removed all the way from where the boy sits to the top of the tree. All the branches and at least twelve feet of the top of the tree have been removed and carried away. These pictures were taken along Mystic Creek at Wekach Lake in Saskatchewan.



Raccoons in Saskatchewan

By **C. Stuart Francis,** Torch River

Since there have been several reports of the Raccoon in the **Blue Jay** I would like to report its presence in this part of Saskatchewan. About ten years ago I saw a dead Raccoon in a Fur Buyer's Store in Nipawin. It had been killed by a farmer only a couple of miles from town. On October 20, 1958, a Raccoon visited our farm one night leaving footprints which were plainly visible in the mud between our two dugouts. The late Dr. H. S. Swallow of Yorkton, in his Nature Column, mentioned the Raccoon as being present in the Yorkton area last summer.

I believe that the Raccoon is widely distributed and perhaps that it is on the increase in all areas of Saskatchewan. The following figures taken from the Department of Natural Resources Annual Reports give the number of Raccoon pelts from 1950-1957 inclusive: 1950, 8; 1951, 23; 1952, 18; 1953, 9; 1954, 17; 1955, 27; 1956, 54; 1957, 21; a total of 177 Raccoons in 8 years.

EDITOR'S NOTE: Mr. H. Lansdell, of Yellow Grass, reports that he saw a Raccoon in August, 1955. It had been found under a granary by Mr. L. McAlister. He says, "The black mask proved beyond doubt that it was a Raccoon."

Short-tailed Shrew at Wauchope

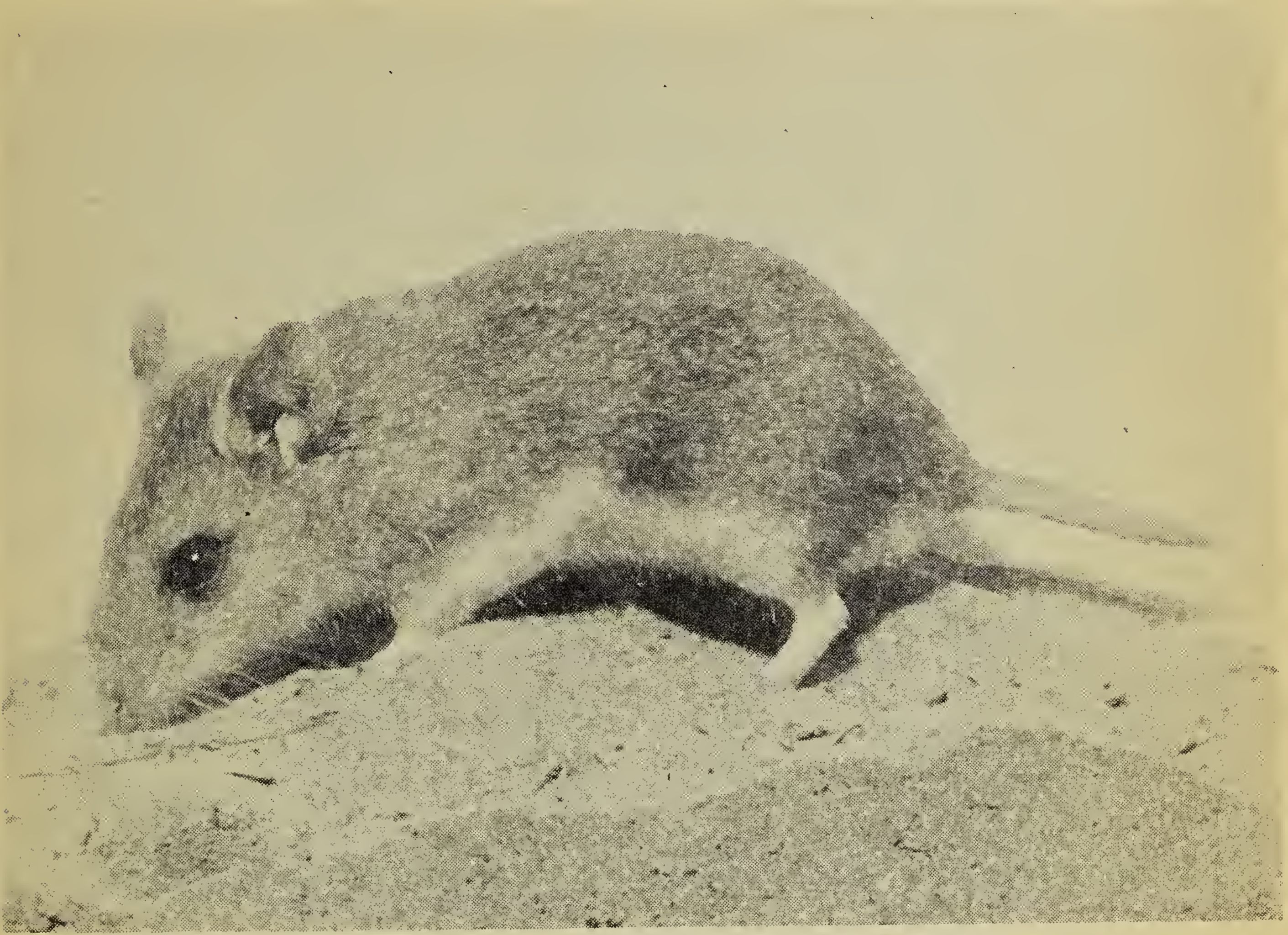
H. H. PITTMAN, Wauchope, Saskatchewan

Sending in for my copy of W. H. Beck's *A Guide to Saskatchewan Mammals,* I am reminded that I photographed a Short-tailed Shrew (*Blarina brevicauda*) in this district several years ago. They are apparently very rare but they show up occasionally.

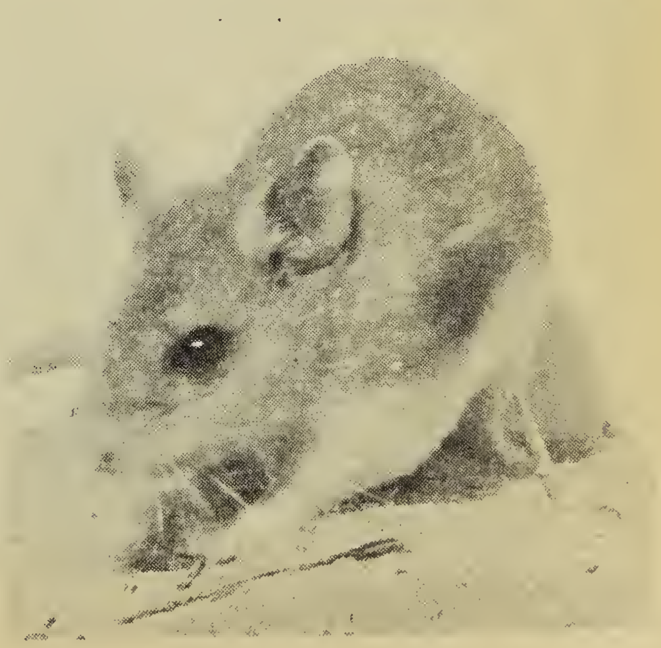
Editor's Note: This record does add an important dot to the map on page 10 of our first special publication.

The Grasshopper Mouse

Photos by **Richard Fyfe**, Saskatchewan Museum of Natural History, Regina



Here the candid camera catches a Grasshopper Mouse (*Onychomys leucogaster*). This is a heavy, robust mouse of the open grasslands, rather uncommon and unevenly distributed. It is larger than the Deer Mouse but smaller than a chipmunk. The fur is fine and soft, gray above and white below, and the short tail is distinctive. The Grasshopper Mouse is carnivorous, being known to feed extensively on insects and upon other mice. (Speciment captured near Saskatoon, July, 1958.)



An Agate Basin Point Site in Sask.

By **Robert W. Nero,** Saskatchewan Museum of Natural History, Regina

INTRODUCTION

Striking lanceolate points and fragments have been found over the last few years by several collectors at a surface site nine miles south of Moose Jaw, Saskatchewan. F. H. H. Roberts (Smithsonian Institution, United States National Museum, has examined some of these points (1957) and he sees considerable resemblance to Agate Basin Points (in Wyoming), to which he assigns a guess date of 7,000 to 8,000 years (Roberts, 1943, 1951). The occurrence of considerable numbers of this specific point-form within a small area with relatively few other point-forms (according to informants) indicates that this site is largely limited to a single culture-complex.

Artifacts reported from the site were generously loaned or donated to the Museum by Austin Ellis, Ron Hill, J. R. Gagné (all of Moose Jaw) and W. F. Judkins, former owner of the site. The land is now owned by E. L. Parkhill who kindly permitted us to examine the area on several occasions in the spring and summer of 1957 when we collected 19 additional items (three lanceolate point fragments, eight end-scrapers, eight knives and retouched flakes). At various times I visited the site accompanied by Ellis, Hill, Judkins, and the following members of the Museum staff: Richard W. Fyfe, Fred W. Lahrman, Bruce A. McCorquodale, Wolfram Niessen and Bruce Shier.

Thanks are due Dr. Marie Wormington, Denver Museum of Natural History, and Dr. William J. Mayer-Oakes, University of Toronto, who kindly examined the manuscript; I am particularly grateful to Dr. Richard G. Forbis, Glenbow Foundation, Calgary, for his conscientious criticism of every aspect of the paper. In addition I should like to thank the many persons at the Society for American Archaeology meeting in Madison, Wisconsin in June, 1957, who examined the material and who encouraged the preparation of this paper.

THE SITE

The Parkhill site occupies an area of about one-half acre (sec. 16, T. 15, R. 26, W of 2nd). It is on a slight north-south ridge which dips gently toward the north into a shallow valley carrying runoff waters north and east to Moose Jaw Creek. Moose Jaw Creek flows north and east and eventually joins the Qu'Appelle River.

The general area is one of low undulating ridges formed of beach sands which are believed to have fronted glacial Lake Regina. Distinct strand lines are not apparent since the fine deposits have been reworked by wind, probably many times. According to Judkins the area was badly blown during the great drought of 1930-39; it remains barren, treeless and windswept. The Parkhill site, judging from the amount of flint debris (including many fine, thin flakes) and the number of point bases, was a camp-site. The large amount of burned flint (18 per cent of the artifacts) suggests the possibility of subsurface remains, especially hearths, though no ash, charcoal or hearth stones are visible on the surface. Whether subsurface features still exist on the site is unknown, no testing having yet been conducted.

ARTIFACTS

Agate Basin Points (Figs. 1, 2): Of 85 determinable - form projectile points or fragments, 65 (76 per cent) may be identified as of lanceolate form. Only 11 points are complete (Fig. 1: A1-5, B1-6). Agate Basin Points are readily identifiable by shape, chipping, and ground lateral edges, a definitive feature of this point form. Although the Parkhill points appear to be rather short, the longest piece (A1) being 73 mm. (2 13/16") in length, wide and thick basal fragments found at the site (Fig. 2: A1-4) clearly indicate that a larger form of lanceolate point is a part of the complex. Resharpening of points with broken tips probably accounts for the frequent blunt and foreshortened appearance.

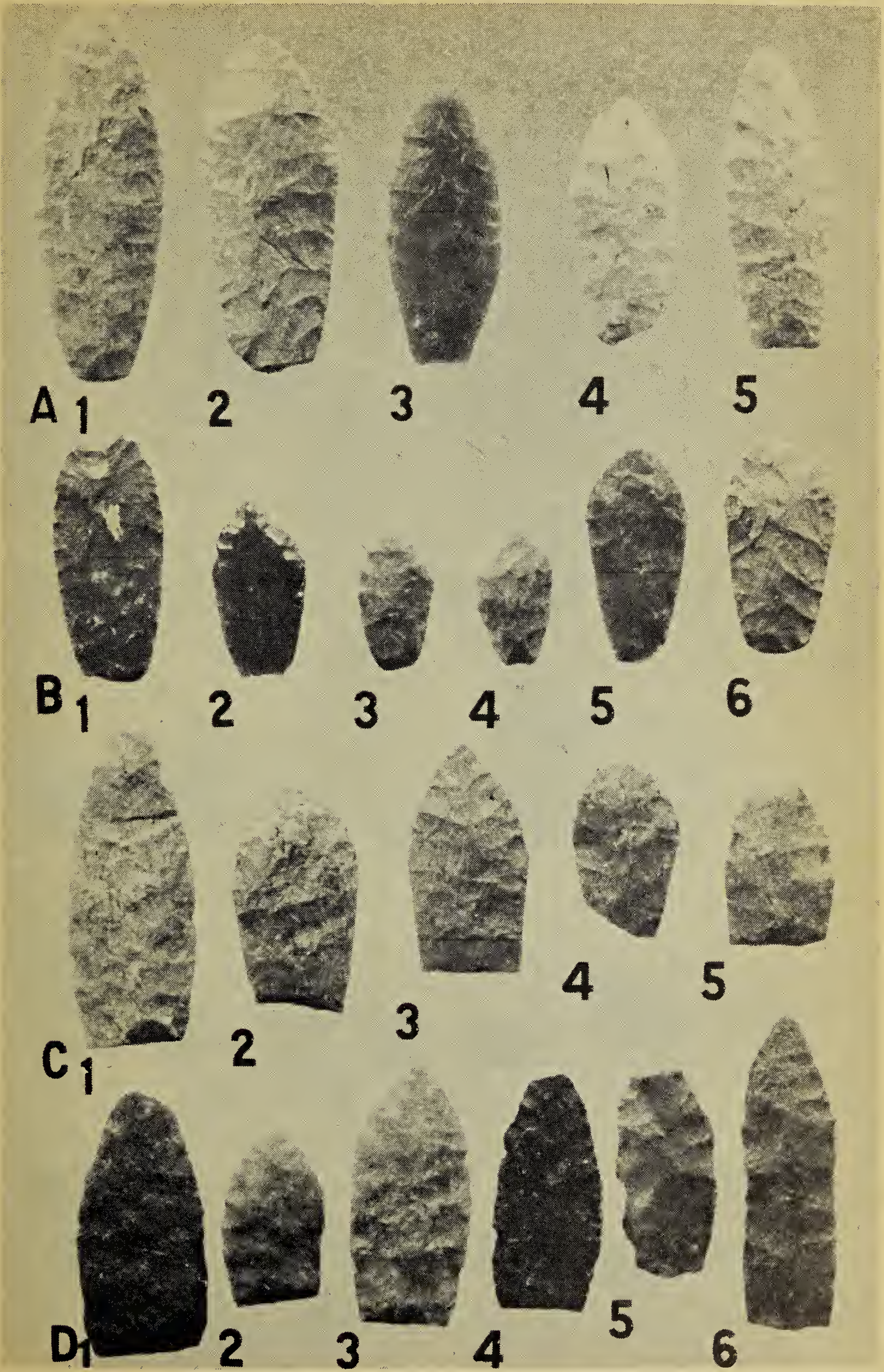


Photo by R. W. Fyfe

Figure 1. Agate Basin points from the Parkhill Site. (A1 is slightly over 2¾ inches in length).

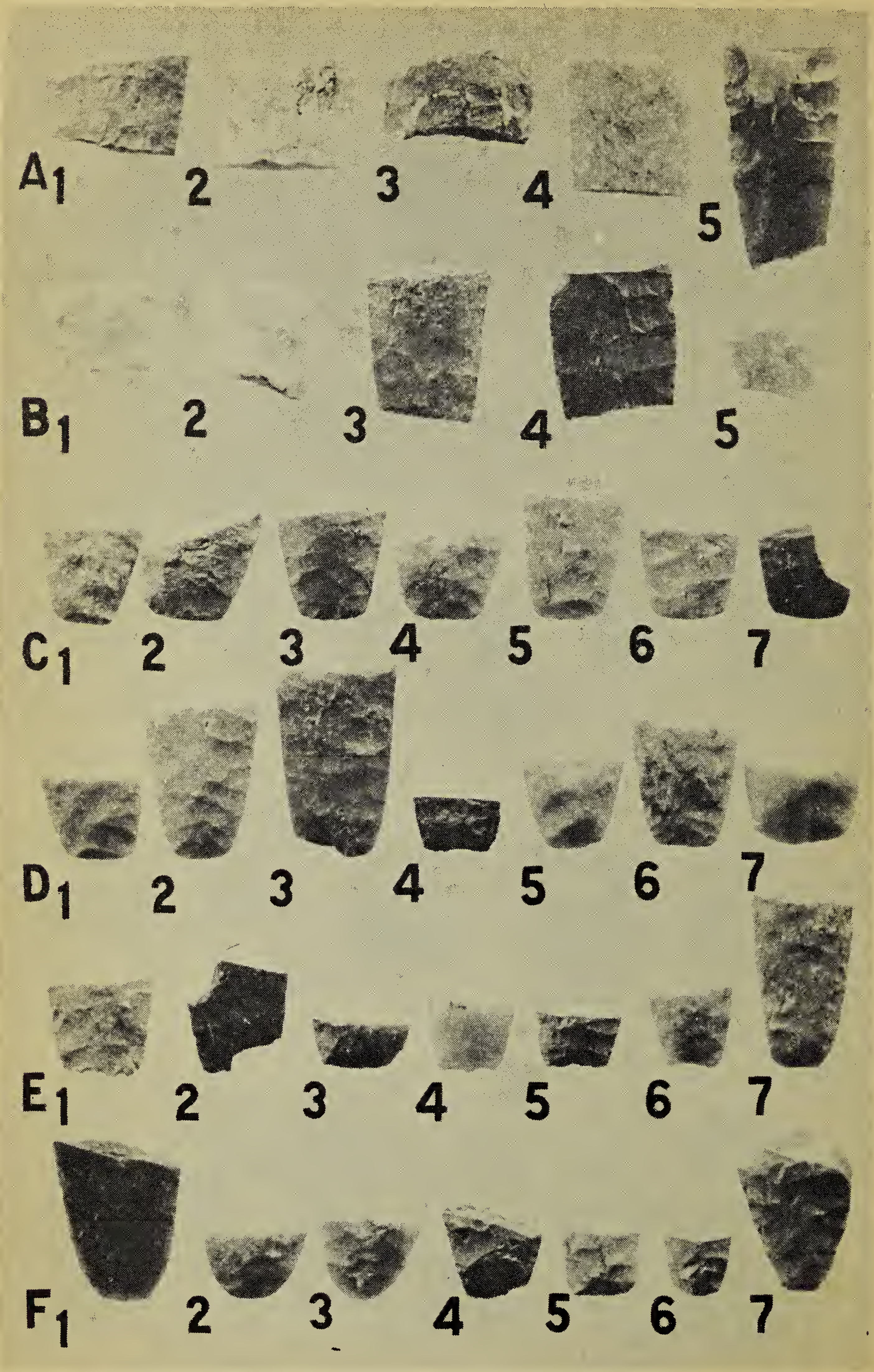


Photo by R. W. Fyfe

Figure 2. Agate Basin points fragments. (A5 is 1¾ inches in length).

For the most part, Agate Basin Points from the Parkhill site have broad, shallow flake scars at right angles to the edges. Flake scars are usually irregular (sometimes parallel) and frequently extend to and even past the midline; but on the whole suggest a carefully controlled technique. Diagonal or "ripple-flaking is present on two points: one is rather atypical and shows only slight grinding (Fig. 1: A3). The other is fragmentary but well-ground (Fig. 1: D4).

In longitudinal section all the points are lenticular, generally thickest at the widest portion (anterior to the midpoint). Cross-sections are also lenticular. Four points have very slight shoulders either on one edge (Fig. 1: D2; Fig. 2: A2), or both (Fig. 1: D3; Fig 2: B1). The ground edges extend to the shoulders.

On four of the basal fragments there appears to be a remnant of a large primary flake scar extending from the base edge up to 10 mm. and as wide, or nearly so, as the base (Fig. 2: C5, F4). These flat surfaces may indicate that the lanceolate points were made from large blades struck from a core.

Basal grinding of lateral edges is characteristic of certain Paleo-Indian points (Wormington, 1957:38). Smoothing of the edges on the present material must have been intentional, resulting not only in dulling the edge but also in straightening it. In experimental attempts to produce ground edges it was found that best results were obtained by rapidly moving a point back and forth against a flat stationary object; a crosswise motion caused undesirable chipping of the edge. A number of possible grinding substances were tested for this use, including bone, sandstone, quartzite, granite and chert (dull, opaque flint). Chert proved to be the only satisfactory material of those tested and showed no perceptible sign of wear. The sharp edge of the hard flint simply sawed through the other materials, and the edge was barely dulled. But when the point was similarly rubbed against a chert flake the edge of the point was ground down very rapidly. Knife River flint and similar material proved too slippery to permit use as a grindstone.

The smoothed edge resulting from this experimental grinding appeared identical to the ground edges of the lanceolate points (straight outlines, longitudinal scratches, indentations missed, flat surface abraded). The slight amount of effort necessary to produce a ground-edge in this fashion suggests that Agate Basin Points were finished by a similar if not identical technique for rapidly grinding a flint edge to specific desirable forms. It may be assumed that Agate Basin Points were ground to conform to a desired pattern. Thus a detailed analysis of the basal form of the lanceolate points should be of some archaeological significance.

As the illustrations show, the basal portions of many points have rather straight lateral edges converging towards the base. This particular outline, roughly obtained by chipping, was refined by grinding. Grinding of the basal edge occurs about half the time, but usually is slight. Base-edge grinding is generally heaviest on points which exhibit the heaviest grinding on the lateral edges. The base edge is usually straight (for 15 points) to slightly convex (17) with gently rounded rather than abrupt corners. The base is thin, sometimes left sharp.

I suggest that a certain relationship exists between basal width and the angle of convergence of the sides. The **angle of convergence** (Fig. 3:A) was rather quickly measured by placing individual pieces on a chart of a series of angles drawn at five degree intervals and moving them about until the best fit was obtained. (Most bases could be fitted fairly well into a particular angle; the whole series that I measured was tested by my wife, Ruth Nero, who obtained similar results.) The angle of convergence could then be readily observed; a straight line drawn at a right angle to the mid-line of each point and in contact with the base of the point permitted measurement of the **"ideal" basal width** (Fig. 3:B). Actual basal width was difficult to measure since most of the Parkhill site lanceolate points have gently rounded corners. The angle of convergence varied from 15 to 35 degrees and a large proportion measured 15 and 20 degrees. "Ideal" basal width ranged from 9 to 15 mm. In these points, as the angle of convergence increases, ideal basal width tends to decrease (Table 1).

Table 1—Basal Measurements of 32 lanceolate points or fragments

Number of points or fragments	8	11	5	3	5
Angle of convergence of sides in degrees	15	20	25	30	35
Average "ideal" basal width in mm.	15	13	12	13	9

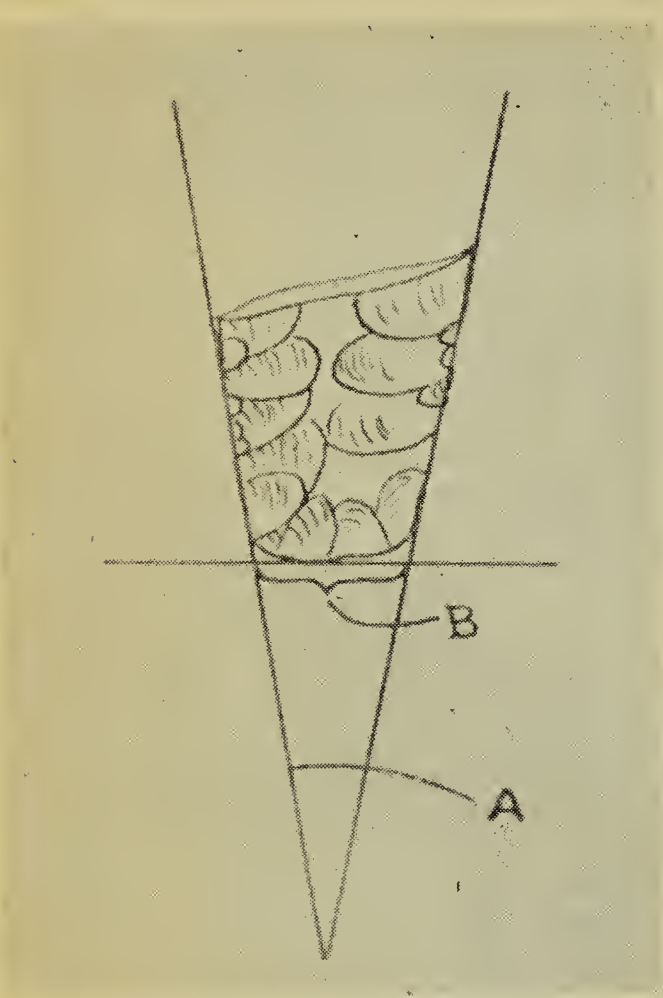


Figure 3. Method of measuring angle of convergence and "ideal" basal width.

I am inclined to believe that heavy grinding on Agate Basin Points was intended more to shape the edge to a specific outline than to dull it. The difficulty of hafting points with abruptly tapered bases would seem to be considerable. Ground edges would only increase the difficulty. I have therefore been led to consider the possibility that the points were hafted in a socket and that the points were shaped to fit a permanent socket. A socketed attachment would allow the shaft to be disengaged from the point after penetration and would make it possible to use repeatedly simply by replacing the points.

Miscellaneous Points: All 20 points found at the Parkhill site other than Agate Basin are shown in Fig. 4. Two have slightly ground edges (D4, 5) but appear to be related to the unnotched, triangular and parallel-sided points of the group (A1, B3, 5) rather than to Agate Basin Points. Eight side-notched points were found; five others may have been side-notched or stemmed. One point (A5) bears on the reverse side two longitudinal and parallel flake scars running the entire length down the center from the base; the other side shows a broad original flake surface and extensive thinning at the base. The form of thirty-three other point fragments could not be determined. Several may be fragments of Agate Basin Points. Two strongly resemble Eden Points.

End-scrapers: The 78 end-scrapers from the site can be divided into two main groups: **Group 1** (45 in number) are generally rectangular or trapezoidal in outline and are of roughly the same thickness throughout. One or more broad flake scars run from end to end. They have been subdivided according to size. Subgroup 1A (20) often have parallel sides (8) (Fig. 4: E2) but usually the sides converge toward the base (12) (Fig. 4: F2). Beveling and retouching of both lateral edges is common. The proximal end may retain a bulb of percussion. Subgroup 1B (25) are thicker than the above and are often thickest at the distal end (Fig. 4: E3, F3). The edges converge toward the base, in a few cases to a point. Retouching occurs along both sides but is rarely extensive. One, however, has flake scars reaching nearly to the center. **Group 2** scrapers (24) have either longitudinally-ridged backs (Fig. 4: E4, 5) or irregular forms resulting from heavy irregular flaking (Fig. 4: F4, 5). The latter two have dressed backs. A few lack retouching on one or both edges (3). All are noticeably thick at the distal end, and have a slightly rounded to round bit which may merge imperceptibly with the edges. Eight have a somewhat pointed base.

Scrapers with ground and worked lateral edges: Eighteen end-scrapers are ground on one or both edges (8 in sub-group 1A; 7 in 1B; 3 in group 2). Smoothing is longitudinal and apparently deliberate. Usually the ground edge is the left one and the right edge shows more undercutting, as if by use.

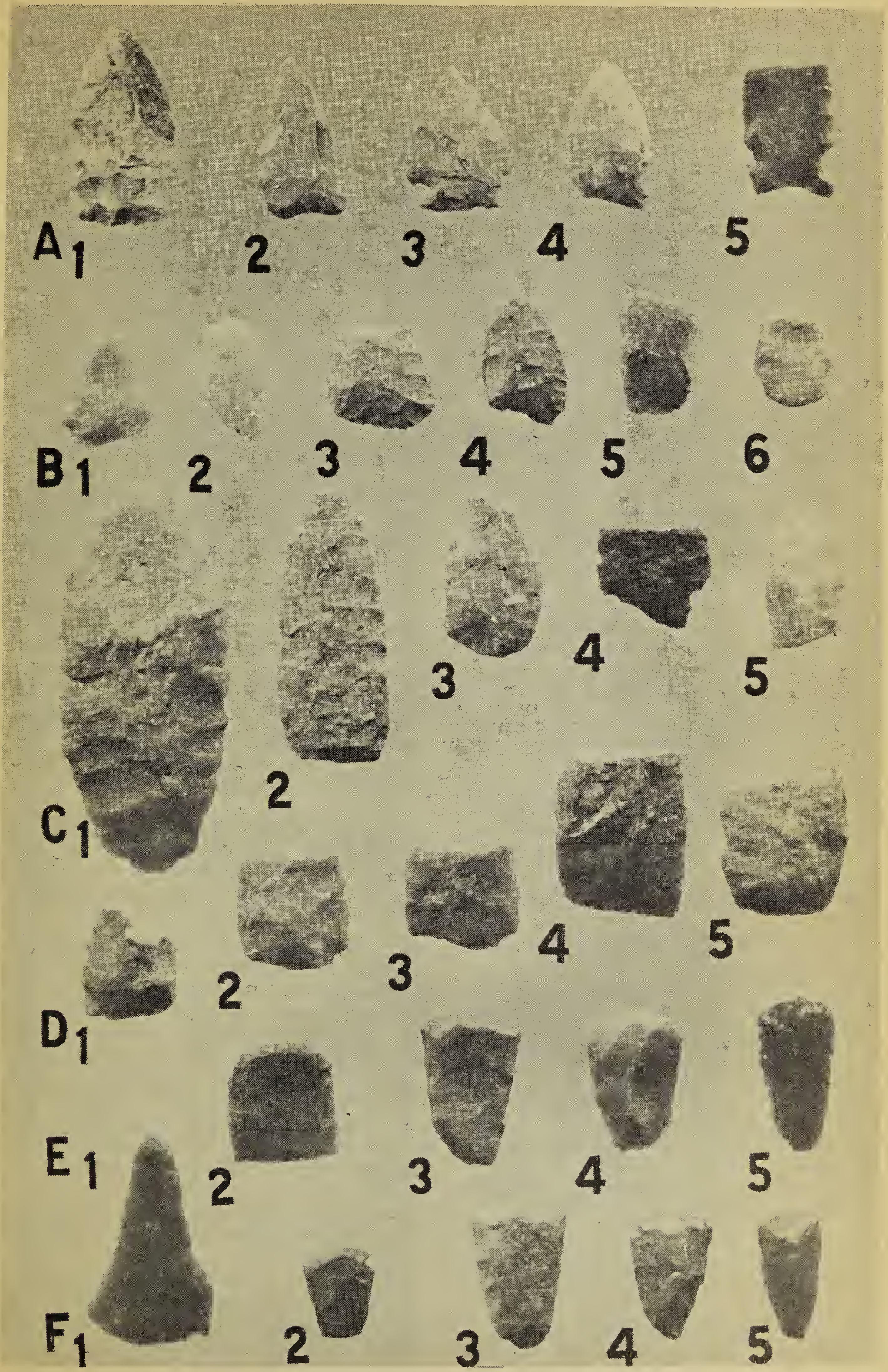


Photo by R. W. Fyfe

Figure 4. Miscellaneous points and scrapers from the Parkhill Site. (A1 is 1½ inches in length).

Examination of all the end-scrapers revealed the occurrence of 21 of these combination forms. In all except three the right edge was the more heavily undercut. It may well be that the side retouching represents preparation of the edge for a cutting or a scraping function rather than for securing a desired shape.

Spurred scrapers: Small, sharp corners or "spurs" occur on 14 end-scrapers (Fig. 4: E3, F3). They may have been formed secondarily as a result of resharpening hafted scrapers.

Two end-scrapers each have notches, in one case on the bit (shallow but well-defined); in the other case on a broken base (shallow and broad).

Gravers: A single well-defined graver was found. It is a multiple type consisting of two tiny graver points based on a very thin primary flake. The distance between the point tips is seven mm., and they are each about one mm. in length. Another possible graver occurs on a crude point which has elsewhere been reworked to a scraper. A lanceolate basal fragment (Fig. 2:F7) has been reworked on one corner to produce an angular projection which may have served as a graver.

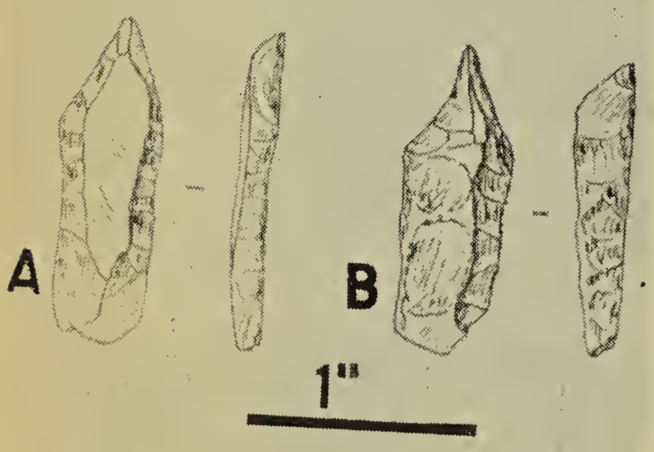


Figure 5. "Graver" — double-side — scrapers from the Parkhill Site.

"Graver" - double - side - scraper: Two narrow, unifacially chipped implements worked along nearly parallel edges each have a graver-like point on one end. One has a flat back (Fig. 5:A), the other is ridged (Fig. 5:B).

Drill (?): A single drill-like implement, bifacially-chipped, is well worked. Its unusual shape suggests a drill or combination tool of some sort (Fig. 4:F1).

"Side-scrapers" and flake knives: A variety of unifacial,, retouched-edge flake or blade implements prepared for a cutting or a scraping function were found. These range from thick, massive flakes trimmed irregularly around the perimeter (1), on one edge (6), or on two sides (3), to smaller, thinner, more flattened flakes made from more tractable materials and with finer retouching on one side (16) or two sides (11) (one with a ground edge). Some thin flakes are carefully (deliberately?) drawn, exhibit broad flake scars on the back, and have more or less parallel edges, often trimmed quite straight, running the length of the flake. A few have a paper-thin edge and were undoubtedly knives. In nearly every case retouching is directed from the plane surface.

Forty-six other irregularly shaped flakes bear secondary retouching and appear to have been used for scraping or cutting. They are random flakes.

Two tiny primary flakes about the size of a small fingernail bear minute unifacial retouching along the edge opposite the bulb of percussion. These are very similar to implements from surface sites in Wisconsin (Nero, 1948). Two retouched flake scrapers also have small notches on one edge. Possible "spokeshaves" also appear on two large side-scrapers and on two end-scrapers.

Bifacial blades: Three complete (and eight fragmentary) bifacially-worked knives (?), generally symmetrical in form, are large and generally crude. One is nicely pointed. Another has a carefully and symmetrically-rounded base. Still another, ovoid in shape, is either a well-made knife or an unfinished projectile point.

TABLE 2—Basal measurements (in mm.) of lanceolate points from three sites.

		Angle of convergence of sides							
Site	"Ideal" basal width	10	15	20	25	30	35	40	No. of pts.
Havey	13 to 20; avg. - 16	4	1	2	1	—	—	—	8
Parkhill	7 to 18; avg. - 12	—	8	11	5	3	5	—	32
Jameson	8 to 18; avg. - 12	—	—	6	5	3	4	3	21

Pebble-flake scraper: One scraping implement is made from a large flake struck from a quartzite pebble. It has nearly parallel sides. The slightly convex distal end is smoothed crosswise to the edge evidently through use. All retouching is unifacial.

Kinds of stone used: More than 60 per cent of the artifacts (75 per cent of the lanceolate points) from the Parkhill site consists of a fine, white chert (dense, opaque variety of flint). Close to 30 per cent (20 per cent of the lanceolate points) are comprised of brown chalcedony ("Knife River flint"). A few are made of burned shale, quartzite, agate, petrified wood and obsidian (two flakes). One lanceolate point is made of shale which appears to have greatly altered since manufacture of the point (Fig. 1: B1). It has a dark brown surface which can easily be scratched to reveal a yellowish interior.

SIMILAR SASKATCHEWAN MATERIAL

Lanceolate projectile points have been found on the surface over most of the southern half of the province (Wettlaufer, 1951; and recent records from **Blue Jay** correspondence). A variety of types is apparent and it will be necessary to classify these in the same cautious manner as has been done with, for example, side-notched points. Nevertheless, Agate Basin type points are discernible throughout the area, being common at sites near Lajord, McCord (L. L. Dewalt collection) and Jameson. Points collected by Eric Bowman (Regina) from an extensive surface site near Jameson are clearly Agate Basin type but still are not identical with those from the Parkhill site. Probably a camp-site, the Jameson site covers an area of several acres. It was heavily blown during the "thirties," attracting several collectors. According to Mr. Bowman, two concentrations of burned bone fragments—possible hearths—were noted on the site. Twenty-three lanceolate points and basal fragments from Bowman's Jameson collection were examined in detail. Only one of these was made of Knife River flint, the others being of various kinds of chert. The material used for some is nearly identical with material from the Parkhill site, but most of the stone has poorer chipping qualities, possibly accounting for the generally rougher appearance of Jameson points. They also tended to be thicker in cross-section, especially toward the base, than those from Parkhill. Eighteen had a straight base; five had concave bases, all more deeply concave than were any of the Parkhill points. One had slight but definite shoulders, formed largely by the grinding of the edge. Basal measurements are given in Table 2. Jameson points, it will be noted, had generally more abruptly converging sides (wider angle of convergence). Several points appeared foreshortened, evidently as a result of reworking the tip. The total length of one point was 81 mm. Others ranged from 32 to 83 mm. (the latter broken) in total length.

DISCUSSION

The lanceolate points from the Parkhill site closely resemble Agate Basin Points. Both are of well-made, lanceolate form with sides converging to narrow, truncated base; straight to slightly convex or (rarely) rounded base; heavy and extensive basal grinding; neat flaking resulting in a rather smooth surface; rarely, a slight shoulder; and wide range in size. Since no detailed description of Agate Basin Points or the associated artifacts is yet available further comparison between the sites is difficult.

Resemblances between the Parkhill site and the Havey site near Madison, Wisconsin (Nero, 1955) are particularly striking. Lanceolate points from these two sites are very similar in their general form and especially in the shape and position of the flake scars, although the Havey site points tend to have more nearly parallel edges (narrower angle of convergence, see table 2). A reworked point or "graver" on a lanceolate basal fragment (Fig. 2:F7) has a parallel at the Havey site. The single distinct graver found at the Parkhill site is identical with gravers from the Havey site where they were especially plentiful (Nero, 1957) and seemingly associated with the lanceolate points. Of possibly more significance is the occurrence at Parkhill of a generally rare artifact: the distinctive "graver - double - side - scraper", some of which were also found at the Havey site (compare Fig. 5:A,B, with the "narrow, double-edged side-scrapers," in Nero, 1955: Fig. 4i, j, k). Both sites contain a high proportion of end-scrapers, not only with trimmed edges, but also with ground edges. Even certain points other than Agate Basin Points from the two sites resemble each other (Fig. 4:A2, 4, 5) suggesting the occurrence of approximately similar complexes. I think that the sites are closely related.

Havey site lanceolate - points, gravers and ground-edge scrapers appeared to be part of a single complex related to eastern late Paleo-Indian and Early Archaic complexes, with a strong affinity with the latter particularly. A number of similarities were found with the Reagen site in Vermont (Ritchie, 1953) and Starved Rock site in northern Illinois (Mayer-Oakes, 1951). Lanceolate points from the Parkhill site appear more closely related to the Havey site lanceolate points than to those from Starved Rock.

I am inclined to consider the occurrence of non-lanceolate points at the Parkhill site as significant and indicative of Early Archaic relationships. There is recent evidence from the Oxbow site and the Long Creek site in southeastern Saskatchewan of similar side-notched points of Archaic type at an early time period (5200 ± 250): Nero and McCorquodale, 1958); 4650 ± 150: Wettlaufer, 1958). Archaic materials, i.e., side-notched points or non-Paleo-Indian items, probably extend to an even earlier period and it seems likely that Robert's guess-date of 7000-8000 years for Agate Basin Points will hold for the Parkhill site lanceolate points as well. Of course, it is to be expected that in time similar materials will be found *in situ* and then a specific date and a broader cultural inventory will probably be obtained. The Parkhill site can further be considered on a typological basis to belong to an early stage of the "Plains Archaic" as outlined by Mayer-Oakes (1956). This lithic tradition, based on Paleo-Indian units such as Scotsbluff and Plainview, bridges the gap between Paleo-Indian and eastern Archaic cultures and is evident as far east as the upper Ohio River valley. The Havey site in Wisconsin has been designated as Plains Archaic by Mayer-Oakes (*op. cit.*); presently expressed relationships between the Havey site and the Parkhill site help strengthen this bond with the Plains.

SUMMARY

1. Sixty-five lanceolate points or fragments found on the surface of the Parkhill site, near Moose Jaw, Saskatchewan, closely resemble Agate Basin Points, and are so designated.
2. Only 20 other points of various types (mainly side-notched) were found on the site. This and other evidence suggests that the site is primarily an Agate Basin Point site.
3. The Agate Basin Points and some associated artifacts from this site closely resemble material from the Havey site, a surface site near Madison, Wisconsin.
4. There is a further similarity in the total complex found at each of these sites, indicating Early Archaic relationships.
5. The juxtaposition of lanceolate and non-lanceolate materials at both sites may be accidental, but it is suggested that this is indicative of a relatively close relationship in time or continuity.
6. The complex of material from the Parkhill site may be designated Plains Archaic (with a preponderance of Agate Basin Points).

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The Spadefoot Toad in Saskatchewan

By **R. W. Nero,** Saskatchewan Museum of Natural History, Regina

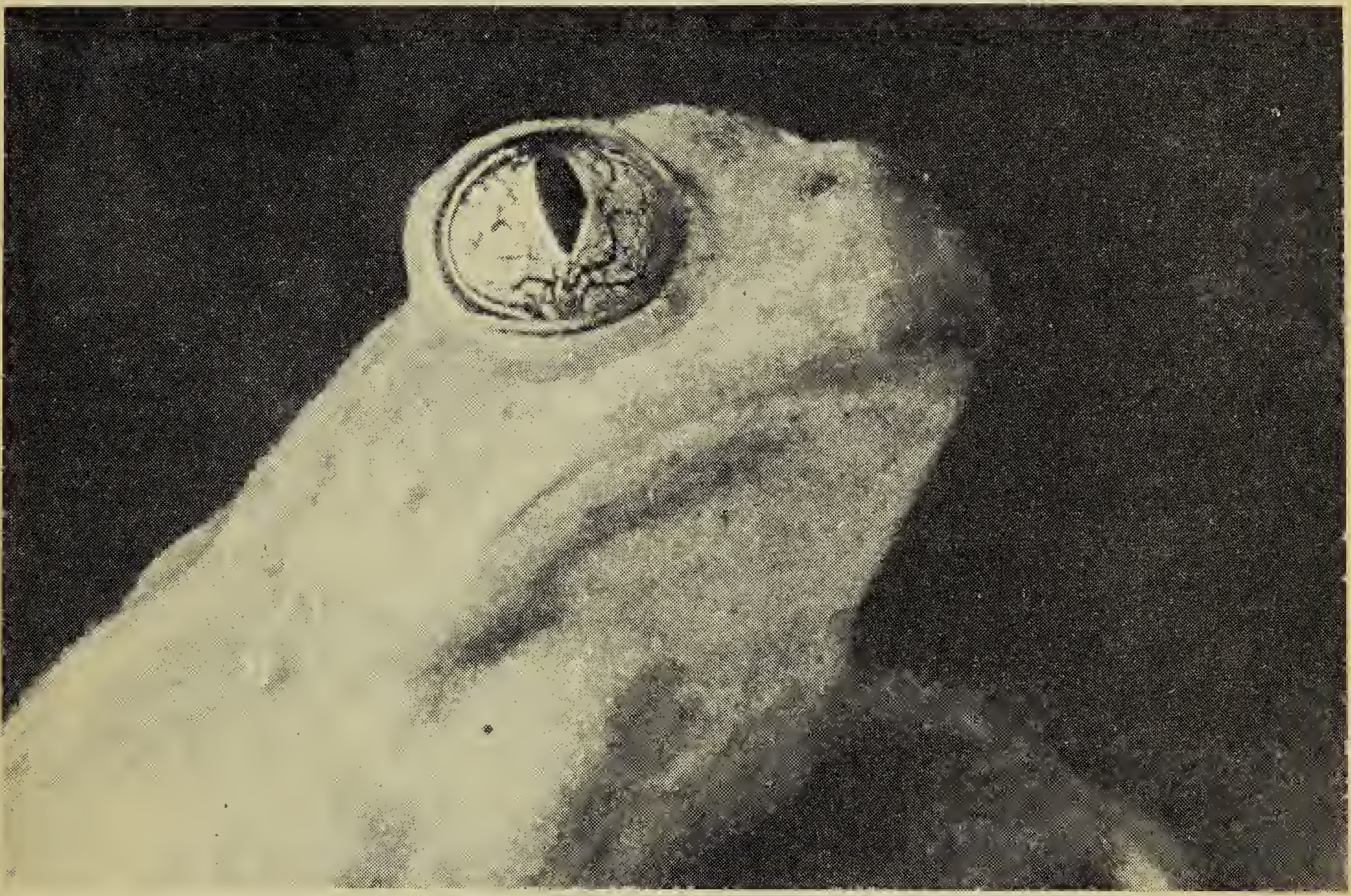
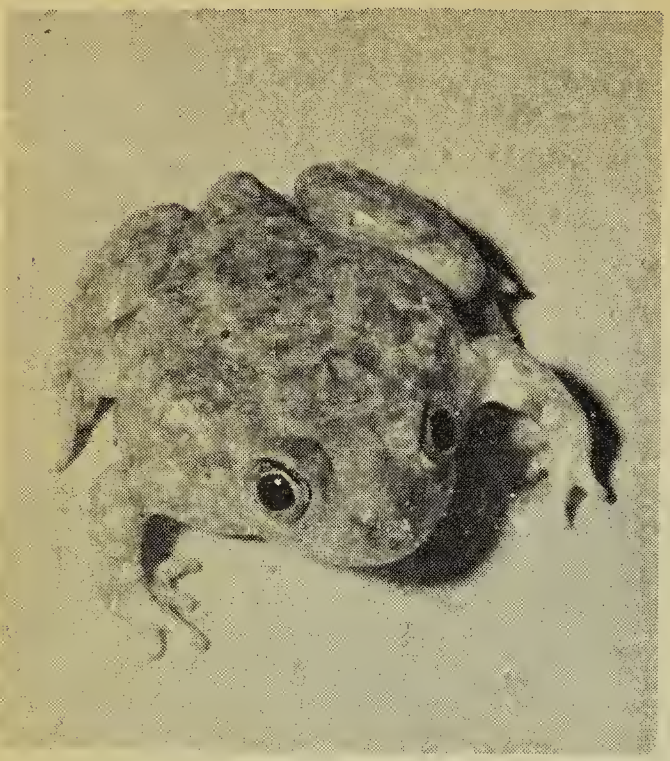


Photo by R. W. Fyfe

Close-up of SPADEFOOT TOAD (August, 1958). Note vertical pupil.

While collecting small mammals in the general vicinity of the South Saskatchewan River at Elbow in the summer of 1958, Fred W. Lahrman and I were fortunate in finding several specimens of the Central Plains Spadefoot (*Scaphiopus bombifrons* Cope). This interesting toad, as its name suggests, is found throughout the central plains from Northern Mexico to Canada. R. C. Stebbins (1951. Amphibians of Western North America. University of California Press) failed to mention any Canadian records but E. B. S. Logier and G. C. Toner (1955. Checklist of the amphibians and reptiles of Canada and Alaska. Contrib. Royal Ontario Museum of Zoology and Paleontology, No. 41) list six Canadian localities, five in Alberta and one in Saskatchewan (see map). The Saskatchewan record was obtained by Dr. E. J. Moore at Alsask on June 25, 1951. However, the Museum has an earlier record for Saskatchewan that has not been published: what is apparently the first spadefoot for the province was collected on July 25, 1949, by Lahrman at Bengough near the Big Muddy Valley. This toad was found at night with the aid of a flashlight.

In the morning of July 14, 1958, we found a spadefoot caught in a mousetrap set overnight at the base of a large sand-hill six miles southeast of Elbow, Sask. It seems likely that it was attracted to the trap by ants and other insects feeding on the



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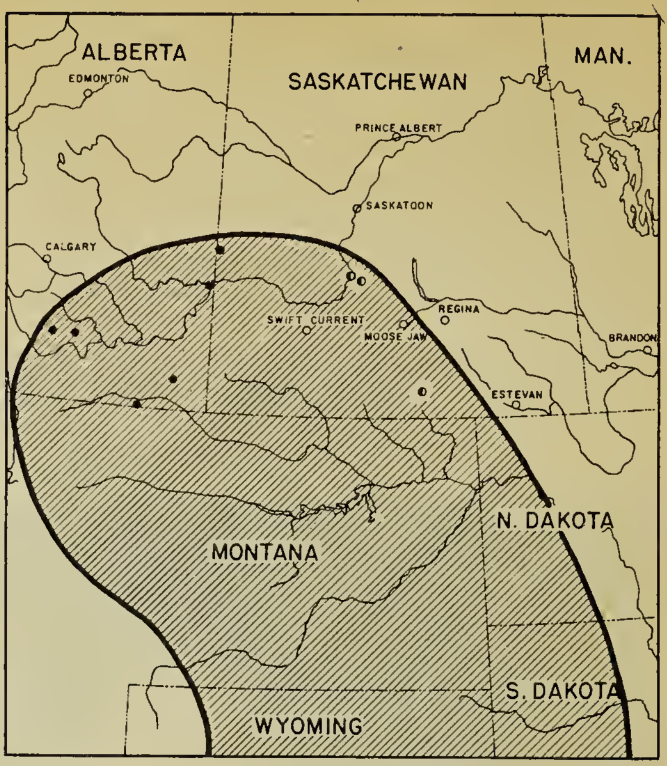
SPADEFOOT TOAD, August, 1958



Northern distribution of the SPADEFOOT. Former records—solid circles; new records—half-solid circles. Map prepared by Theo. Kramer, Survey Branch, Dept. of Natural. Res.

trap bait. Later in the afternoon another toad was accidentally uncovered while we were digging for Pocket Mice on a sandy road in the same vicinity. This toad was less than one foot underground beneath a slight circular depression which we had taken to be the mouth of a closed Pocket Mouse burrow. Spadefoots normally remain underground during dry weather. They dig remarkably fast; a protuberance on their hind-leg, from which they derive their name, aids them in digging down backwards and out of sight in a few minutes. About 10 p.m. on July 15 we captured two more spadefoots in the car headlights on the same road. Six others were collected the same night on a sandy road on the south side of the South Saskatchewan River, about four miles southwest of Elbow. No doubt this large number of spadefoots represented an increased activity following late summer rain. It rained heavily on the night of July 12 and lightly all afternoon and evening July 13. According to Stebbins (*op. cit.*) spadefoots usually appear with the rains, breeding after heavy rains in spring and summer, in temporary pools usually of considerable size. In Kansas they were observed breeding as late as August 8. With this information in mind it should be possible to find spadefoots in other localities. They are easily recognized because of their unique vertical pupils (see photo). They are pale greenish-gray and are smoother than most other toads. They are frog-like in many respects and are even rather fast-moving. Further records are certainly desirable, and we would like to hear from anyone who may be familiar with this interesting animal. The present distribution of the spadefoot (see map) provides additional evidence of the semi-arid nature of the southwestern portion of Saskatchewan, an extension of the Northern Plains. The varied fauna of this interesting region includes Kangaroo Rats (**Blue Jay,** Dec. 1956), Pocket Mice (**Blue Jay,** Dec., 1958), Horned Toads (**Blue Jay,** Sept. 1957), Rattlesnakes (**Blue Jay,** March, 1956), and Prairie Dogs (**Blue Jay,** Sept., 1958). Further studies in the South Saskatchewan River basin are being planned, particularly in view of the future flooding of the valley floor from Outlook west nearly to the border by a large dam which is now under construction. Anyone with information concerning this area is invited to correspond with the Museum or the **Blue Jay.** We would like to know about common as well as uncommon animal life, about nesting hawks, etc., about specimens which might be available from the area and any clues whatsoever to the natural history of this region.

The Blue Jay Bookshelf

THE BIRDS OF ALBERTA. By W. Ray Salt and A. L. Wilk, Queen's Printer, Edmonton, 1958. $5.00 prepaid.

The publication of this book some ten days before Christmas was a major event for all prairie naturalists. Color illustrations have been used lavishly and yet the price has been kept surprisingly low, thanks to support from patrons and, particularly, the Government of Alberta. I imagine that a large percentage of readers of the **Blue Jay** will wish to purchase it. It should now be the first bird book recommended to anyone in Alberta or the western edge of Saskatchewan. No book can ever replace Peterson's *Field Guide* (eastern) in central or eastern Saskatchewan, but Alberta people have to own and carry both eastern and western guides.

The book contains 511 pages, all on first-grade glossy paper. For each of the 315 species, there is one page of text and a half-page illustration. The authors state that their book is "intended to be an aid primarily to those who are not too well acquainted with the birds of Alberta" and they wish to help the reader, first, to identify any bird he sees and, secondly, to find those species he wishes to observe. Much unpublished information has been utilized, including field notes of forty Alberta ornithologists. A few species have been accepted on the basis of "reliable sight records." The book is fittingly dedicated to the late Frank L. Farley.

Alberta ornithologists have contributed 110 color photographs, many of them outstanding. The majority were provided by Cy Hampson of Edmonton and Kay Hodges of Calgary; but S. MacDonald, Harry Pegg, Al Oeming, Edgar Jones and Mary Forge are also represented. Then there are eighty color paintings reprinted from *Birds of Canada*, eleven from *Birds of Canada's Mountain Parks*, and one by Fenwick Lansdowne. Eighty-one species are illustrated by black and white sketches, and some by color paintings by Ray Salt. Although these illustrations are not uniform in quality, this is after all the first Western Canadian bird book to illustrate each species. Another outstanding feature is the small (but almost too small) outline map showing at a glance the known range for each species.

As this is a "popular" book, nearly half of the account for each species is devoted to "Description" and "Field Identification," much after the style of Taverner's *Birds of Canada*. Nests and eggs are described (even for species that do not nest in Alberta). The "Remarks" are generally interesting, though slanted to the novice.

The page on bird banding, the two illustrated pages on bird structure, and the map of vegetation zones, are all excellent. The serious ornithologist will take note of the representative nesting dates given for 187 species, and the documented breeding records for ten more species. However, one wishes the authors had been more explicit, for the phrase "known to breed" is used for many more species without further data, and one suspects that nests or flightless young have yet to be discovered for some of them.

Subspecies are given a vernacular as well as scientific name in the fourteen page Check-List, which is otherwise largely a repetition of the title of each page. Such information is hardly likely to be of interest to the beginner, for whom the book was written. This space might better have been used in citing a bibliography (which is totally absent), historical data, unusual observations, representative migration dates, banding records, or further details concerning the 27 hypothetical species listed. Perhaps the authors have accumulated enough data to consider publishing a further volume along the lines of *A Review of the Fauna of British Columbia*, by J. A. Munro and I. McT. Cowan, or *The Birds of Maryland and the District of Columbia* by R. E. Stewart and C. S. Robbins.

Lastly, I was disappointed with the highway map. It omits many of the localities so often mentioned in the text, such as Winterburn, Belvedere, Glenevis, Pine Lake, Miquelon Lake and Chestermere Lake, to name but a few. Some of these can be located only by investing $1.25 in a "Gazeteer of Canada-Alberta" and even then I had trouble with Gorge Creek and Sandy Lake, and could not find Zep Lake.

In summary, considering present-day color publishing costs, this book is an excellent buy, and should be a local "best-seller."—C. Stuart Houston, Yorkton, Saskatchewan.

A GUIDE TO SASKATCHEWAN MAMMALS. By W. H. Beck, Saskatchewan Natural History Society Special Publ. No. 1. Pp. 52, 8 photographs, 20 figures, 61 unnumbered drawings, paper covers. October 17, 1958. Price, 50 cents postpaid, Saskatchewan Museum of Natural History, Regina, Sask.

According to the introduction, *A Guide to Saskatchewan Mammals* records 105 species and subspecies, of which six are "hypothetical," three extirpated, and one (the bison) existing only in enclosed preserves and parks. Accounts of geography and life zones precede a check-list of 77 species. Pages 46 and 47 carry directions for collecting and storing study specimens and are followed by a list of literature cited and an index.

On pages 7-45 subspecies, species, genera and families are described. The keys for use in identifying specimens are the more useful because drawings of structural details are included. The small photographs of mammals are good.

No printed date of publication (day on which the first copy was placed on sale or in the mail) appears on the booklet. The directions for preparing skins unfortunately omits instructions on poisoning skins before they are stuffed. In a future edition black symbols on the outline drawings of the province should be rechecked against localities listed in text and *vice versa* in order to avoid inconsistencies such as are illustrated, for example, in the account of *Sorex cinereus* on page 8 where some localities named in the text are not shown on the drawing and some symbols thereon are unaccounted for in the text. Also the occurrence at Osler (Jackson, N. Amer. Fauna, 51:53, July, 1928) was overlooked. The author has commendably sought in several museums other than that at Regina such specimens as provide significant records of occurrence. Figures lack indication of magnitude and Nos. 10-15 would have been improved if reduced by one-half as would numerals on all figures. Each of the drawings of the province deserves a border, scale of miles, and indication of longitude and latitude in order to qualify as a map.

A notable and highly valuable feature of the Guide is the above-mentioned series of drawings of the province whereon the black symbols show record stations of occurrence. Many of these stations provide substantial extensions of known geographic range. The drawings enable anyone to determine quickly whether or not newly-captured mammals provide extensions of known range. These drawings, and the Guide as a whole, should stimulate persons in possession of additional information about mammals to publish their records so that the information will be available to all. Saskatchewan has a larger proportion of citizens interested in their wild animal associates than do some less progressive provinces and states in North America. Also, more remains to be found out about the geographic ranges of mammals in Saskatchewan than in several other parts of North America. Therefore, a large number of persons will be grateful to Mr. Beck, to the persons who assisted him, and to the sponsoring Society and Museum for this highly useful and timely Guide to the mammals of Saskatchewan.—E. Raymond Hall, The University of Kansas, Lawrence.

EDITOR'S NOTE—We are pleased to have an eminent mammalogist from outside the province review the Saskatchewan Natural History Society's first special publication. Dr. Hall is the Director of the Museum of Natural History and Professor and Chairman of the Department of Zoology at the University of Kansas. He has named more than 150 genera, species and subspecies. He has published 235 scientific papers and he is the author of books on mammals of Nevada and Kansas and on American Weasels. He is co-author with K. R. Kelson of *The Mammals of North America* (The Ronald Press Company, New York, '58). This monumental work of two volumes describes 3,800 kinds of North American mammals. It contains many maps and drwings and sells for $35.00.

You are reminded that *A Guide to Saskatchewan Mammals* is available also from E. L. Fox, 1053 Gladmer Park Regina. Price 50c.

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Printing costs per page for the **Blue Jay** were raised at the end of 1958, and it is more important than ever that we strive for a larger circulation to meet these new costs. Please encourage other people interested in natural history to become members of the society.

We are also making a special appeal in this issue for further donations to help meet the additional costs of publishing the society's special publications.

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